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DEMONSTRATION OF A STATE WATER QUALITY MANAGEMENT INFORMATION SYSTEM

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

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This report is a documentation of the Pennsylvania Water Quality Management Information System (WAMIS). The report is divided into two volumes. The first is a program manager's overview of the system, while the second is a compilation of elements required for system application. The program manager's overview discusses the objectives of the system and its development, describes the operations of the various system modules, including required inputs and outputs as well as uses to which the system may be put, estimates manpower and operating cost requirements, and summarizes methods for system application. Detailed documentation of elements required to apply the existing three system modules - the Facility Status, Water Quality, and Contact Modules - is included in Volume II. Volume II includes system inputs with detailed coding instructions, sample output reports, and documentation of each of the three system modules. Module documentation is comprised of system inputs and outputs, system flowcharts, system books, control procedures, clerical procedures, operator's instructions, and all program books. Sufficient information is provided to enable application of WAMIS modules by other states or jurisdictions.

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DEMONSTRATION OF A STATE WATER QUALITY MANAGEMENT INFORMATION SYSTEM

by

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Water Quality Management

Project S-801000
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Project Officer
Ronald E. Bunce
Region III
Environmental Protection Agency
Philadelphia, Pennsylvania 19106

Prepared for
Washington Environmental Research Center
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SECTION I

INTRODUCTION

In the early 1960's, it became apparent that the combination of intensified efforts to enhance water quality and the accelerating accumulation of information relative to water quality management required highly sophisticated techniques for managing such information. At that time, high-speed electronic computers already had demonstrated great promise for handling masses of information for other purposes. Hence, it became obvious that the formulation of water quality management data systems using computers would become essential in guiding many of the policy decisions of the coming decades.

Toward that end, the Conference of State Sanitary Engineers, in November 1963, formed the Joint Committee on Water Quality Management Data. Other organizations represented on the Committee were: U.S. Army Corps of Engineers, Soil Conservation Service, State and Interstate Water Pollution Control Administrators, U.S. Geological Survey, U.S. Public Health Service, and later, the Federal Water Pollution Control Administration. In May of 1967, the Committee issued a report entitled, "Water Quality Management Data Systems Guide". The primary purpose of this manual was "... to provide a guide to the development of water quality management data systems for agencies which have little or no experience in this field, and to develop compatability among agencies already having water quality data systems".

During the period when the Committee was formulating their manual, the Federal Water Pollution Control Administration established their own management information system, STORET. FWPCA, and successor organizations, used this computer-oriented management information system for storage and retrieval of water quality, municipal and industrial facility inventory, fish kill, oil spill, construction cost, and other related data. However, during the middle to late 1960's, when the STORET system was being evolved, state agencies recognized the need to tailor data systems for their specific locale and needs.

The Commonwealth of Pennsylvania has in place a massive investment in physical facilities intended to aid in the management of its water resources. The current investment is estimated to be about $10 billion, with an investment growth rate of about $1.5 billion per year. In administering the wise use of this investment, and in assuring compliance with federal and state statutes designed to protect water resources, the Commonwealth's Bureau of Water Quality Management is faced with managing a massive amount of information. Table 1 gives an indication of the breadth and scope of information which bears directly on the Bureau's ability to manage effectively.

Because of the magnitude of information to be collected, stored, retrieved, and analyzed, the concept of a state-wide Water Quality Management Information System (WAMIS) was developed.

Table 1. BUREAU OF WATER QUALITY MANAGEMENT PROGRAM STATISTICS

Miles of Streams	50,000
Square Miles of Groundwater	45,000
Number of Dams	2,700
Number of Sewerage Treatment Plants	2,600
Number of Industrial Waste Treatment Plants	2,500
Number of Water Works	1,300
Number of Swimming Places	3,600
Number of Encroachment Permits	35,000
Number of Inspections Per year	17,650
Number of Enforcement Actions Per year	830
Number of Permits Issued Per Year	2,200
Number of Operators Certified	4,100

This information system reflected the objectives of the Joint Committee "manual" and, additionally, incorporated objectives related to specific problem areas peculiar to the State of Pennsylvania.

The Water Quality Management Information System (WAMIS) was intended to:

1. plan inspections;
2. measure progress in terms of enforcement, construction schedules, and upgrading water quality;
3. assess permit coverage;
4. identify problem areas and priorities;
5. determine specific treatment, research and development, and budgetary needs;
6. monitor operation reports;
7. issue and monitor certificates to operators;
8. prepare mailing lists;
9. monitor ground and surface water quality;
10. assist in planning;
11. collate, file and disseminate information; and
12. respond to federal reporting requirements.

The subsequent chapter defines the system objectives as perceived at the time of project initiation, and then describes how these objectives were modified through experience with the project during later years. In addition, the current status and future plans for the State Water Quality Management Information System (WAMIS) are identified.

SECTION II

SYSTEM OBJECTIVES

The Commonwealth had recognized the need for managing the growing mass of water quality information well in advance of the demonstration project application and had taken steps toward building a coordinated system. Although some of the information was manipulated manually, it is interesting to note that three of the principal criteria continue to guide its evolution even today. First, the system was conceived as being specifically tailored to meet state needs. Second, the system was intended to be versatile, dynamic, and expandable in order to fulfill changing needs, and third, individual components of the system were to be interrelated so that these components could be used separately to serve a specific need, or together to achieve an overall coordinated result.

The project objectives specified for the initial demonstration project were as follows:

> "To demonstrate a state-wide water quality management information system, including case status, project status, water quality control, and plant operation control systems."

At the time of project initiation, the State already had designed three systems, previously manually manipulated, which required that a total of 30 programs be written as part of the project. These three systems were the Project Status, Case Status, and Water Quality systems. Some of the initial objectives of each system were:

A. Project Status System

1. To evaluate the constantly changing status of facilities being constructed and/or modified to abate water pollution and to assure adherence to the Pennsylvania Clean Streams Law, as amended.

2. To answer requests from other agencies, organizations, governmental bodies (federal, interstate, state and local), and individuals in regard to the latest information on a state-wide, county and/or municipality basis. Types of requests to be answered would be: status of construction of projects; status of grants.

3. To record:

   a. construction in progress
   b. cost of projects
   c. amounts, kinds and types of grants applied for
   d. amounts, kinds and types of grants received
   e. adherence to construction schedules

B. Case Status System

1. To maintain an inventory of water supply, sewerage, industrial waste, bathing place and beach facilities within the Commonwealth.

2. To monitor adherence of all facilities to:

   a. the Clean Streams Law
   b. permit conditions
   c. orders of the Sanitary Water Board
   d. enforcement actions
   e. implementation plans submitted to the Federal government

3. To answer questions from agencies, organizations, governmental bodies (Federal, state, interstate, and local), and individuals in regard to the latest information on a state-wide, county and/or municipality basis. Types of requests to be answered could include: status of case(s), status of facility (facilities).

C. Water Quality System

1. To record all water and waste quality samples gathered in the Commonwealth from:

   a. industrial waste facilities
   b. sewerage facilities
   c. water supply facilities
   d. bathing places and beaches
   e. mine drainage
   f. surface waters
   g. ground waters

2. To compare the laboratory results of samples with existing water quality criteria or existing effluent standards and to inform management of exceptions so that corrective action may be initiated.

3. To maintain two major files which would include information on the quality and characteristics of the water and the nature of the pollutants in the waters within the Commonwealth.

   a. STORET I - All stream water and waste quality samples
   b. STORET II - All non-stream water and waste quality samples

4. To retrieve data from the files to facilitate management of water quality.

It was planned to convert existing records on water quality samples to STORET I and STORET II coding and prepare this data for computer input.

In addition to programming of the aforementioned systems, two systems were to be designed as part of the project. The Plant Operation Control (POC) system was to be designed to monitor the operating performance of water and wastewater treatment plants. The system would determine which plants meet standards and would show the quality and quantity of discharges. The system also would identify missing required reports.

The second system to be designed would be logic checking of input for the Case Status System. The system would verify input data to assure adherence to enforcement policies, as well as the internal consistency of the data.

During the first phase of the project, a concept of a comprehensive water quality management information system was crystallized. The concepts which guided the initial approach were formalized and ordered within a coordinated system. The system was visualized as ultimately being comprised of eleven semi-autonomous system modules, each of which, although interrelated, could be operated independently of the others. These modules and their intended purpose were as follows:

1. <u>Application Review Module</u>

   Reviews routine permit application.

2. <u>Application Permit Module</u>

   Records and reports status of application prior to and after permit approval.

3. <u>Grants Module</u>

   Records and reports data on federal and state grants.

4. Project Status Module

Records and reports data on needed facilities and tracks those under construction.

5. Contact Module

Contains names, addresses, titles, and certification data on individuals, agencies and organizations having responsibility for or interest in water quality management.

6. Facility Status Module

Contains all facilities impinging on state's water system. Reports on design, inspection, enforcement, and identification data.

7. History Module

Contains historical data on inspections, enforcements, and operator changes and design specifications no longer carried in appropriate files.

8. Plant Operation Control Module

Monitors plant operating performance based on data submitted by plant operator.

9. Water Quality Module

Files information on field and laboratory analyses of samples. Compares sample results to performance and stream standards.

10. Pollution Status Module

Reports data on single pollution incidents such as fish kills and complaints.

11. Water Usage Module

Reports data of past, present and projected water use.

With the completion of the comprehensive system design, the priorities for completion of the newly defined modules were re-evaluated. It should be noted that there was a certain amount of amalgamation in the comprehensive system design, as compared with the original system objectives. Also, the Case Status System was renamed as the Facility Status Module. First priority for completion was assigned to the Facility Status and Water Quality Modules.

Objectives during the second phase of the project reflected the accomplishment of the first, principally through the comprehensive system design. Specific second phase objectives were to:

1. do the necessary programming and data processing so as to test, evaluate and demonstrate management information systems techniques related to the Contract, Project Status, Plant Operation Control and Water Quality Modules;

2. convert existing information handling techniques to modern EDP techniques;

3. design specific modules for: Plant Operation Control Application Permits, Grant Status and Project Status. Complete the design of the Water Quality Module.

In addition, work was to continue on the module furthest developed, the Facility Status Module.

During the second phase of the project, the Facility Status, Water Quality, and Contact Modules became operational.

The third phase anticipated that the Plant Operation Control, Project Status, Grants, and History Modules would be made operational; and if time and funds permitted, design of the Application Permit Module would be completed. In actuality, however, these objectives were not achieved.

A principal reason for not achieving these goals is one commonly encountered in the implementation of automated data systems. As ambitious and pervasive computer programs are designed, developed, debugged, and eventually run on "live" data, detailed operational problems become evident. In addition, there is a "learning curve" associated with educating persons with responsibility for coding input data. The ensuing problems, while not major in terms of the overall system concept, lead to time-consuming and sometimes tedious attention to detail. Such was the case during the third phase. The time between making a module operational on test data and arriving at routine implementation was underestimated. Hence, a major amount of effort was expended in completing unanticipated detailed tasks. It appears, however, that these problems have been surmounted, and that WAMIS

is an integral part of the Bureau of Water Quality Management's activities. Now it is used routinely and greatly simplifies the myriad facets of data management encountered by the Bureau.

Additionally, during the third phase of the project, it became apparent that the modularized system concept required modification. Data flow between modules indicated a much greater interdependence than originally visualized. Therefore, steps were taken to integrate the various modules into a more coherent system. Although the term "module" emphasizes a relatively self-contained element in the overall system, the term was preserved as greater integration resulted in order to avoid any potential for confusion by WAMIS users, even though it was recognized that the system elements were not truly modularized.

During the third phase, it became apparent that new developments had been made by the Environmental Protection Agency in data systems management, and the Bureau believed that certain EPA data systems might be able to handle some of the projected effort specified in the WAMIS Work Plan. Thus, considerable time was devoted to investigating such possibilities.

Hence, currently the three operational systems are the Facility Status, Water Quality, and Contact Modules. Most of the work during the third phase was devoted to improving these modules, in particular, the Water Quality Module. The Water Quality Module was almost completely redesigned and reprogrammed based on greater use of the EPA STORET System.

Considerable effort also was expended in developing a long-range Work Plan for WAMIS, in investigating the potentials for interfacing with EPA data systems, and in developing a preliminary design concept for the Plant Operations Control (POC) Module and Project Review and Permit (PREP) Module. As currently envisioned, the objectives of the POC Module are to: 1) monitor and report on effluent requirements and plant and system operations requirements for all wastewater discharges; 2) monitor and report on important water quality characteristics in public water supplies and waterworks operations requirements; and 3) originate violation and enforcement action reports.

The objectives of the PREP Module, on the other hand, are to monitor and report on time-constrained events such as: permit applications, projects submitted for review by other agencies, and conditions, decisions and actions related to project permits, certifications, and approvals. PREP may ultimately combine elements of the Application Review and Application Permit Modules previously discussed.

In terms of current status, the Facility Status Module has been operationsl for nearly two years. It contains information on wastewater facilities, water supply, bathing places, industrial wastes, and sewerage programs. Within the module, data is organized into three groupings. The first is descriptive information regarding the facility.

The second is a record of inspections for each facility, and the third is a record of enforcement actions for each facility. All three functions are used routinely. Records for over 36,000 facilities are maintained within the system.

Also within the Facility Status Module is the Enforcement Sub-system. The Sub-system contains information on each legal action with regard to a facility and then identifies each step in the legal process against that facility.

During November 1973, the revisions of the Water Quality Module were completed. This module stores pertinent water quality data on the Department Computer. The water quality data are currently being transferred to EPA's STORET system to make full use of its retrieval capabilities and options with an operational date of May 15, 1974.

The Contact Module contains two separate files. The Certified Operator Sub-system compiles data obtained from application forms submitted by operators and prints operators' certificates. Data is neither summarized nor manipulated, but is consolidated into a single report and interpreted for the user.

The Name and Address Sub-system contains 22 mailing lists with about 150 sub-lists. The lists cover many subjects and include all mailings lists for the Bureau of Water Quality Management.

In terms of future plans for the WAMIS System, the Bureau of Water Quality Management has produced an internal document entitled, "WAMIS Work Plan", which reflects currently envisioned plans for updates, modifications, and additions to the System. This document was first issued internally in memorandum format on August 21, 1973. On the basis of interviews with System users, most of the needs identified by management and field personnel have been taken into account in the Work Plan. The Work Plan is a "live" document which is continually updated as new ideas and needs arise.

Recently, information has been prepared by the Bureau of Water Quality Management to summarize for Department of Environmental Resources managers the manner in which WAMIS is expected evolve in the future. Figure 1 shows the inter-relationships of existing operational modules with those expected to be designed or implemented. Table 1 is an explanation of the types of information transferred between WAMIS elements as denoted by the numbered data flow routes. As had been previously noted, the Facility Status Module, including the enforcement and inspection sub-systems, is operational and used routinely. Likewise, the Name and Address and Certification sub-systems, which comprise the Contact Module, also are operational and used routinely.

Figure 1. WAMIS DATA FLOW

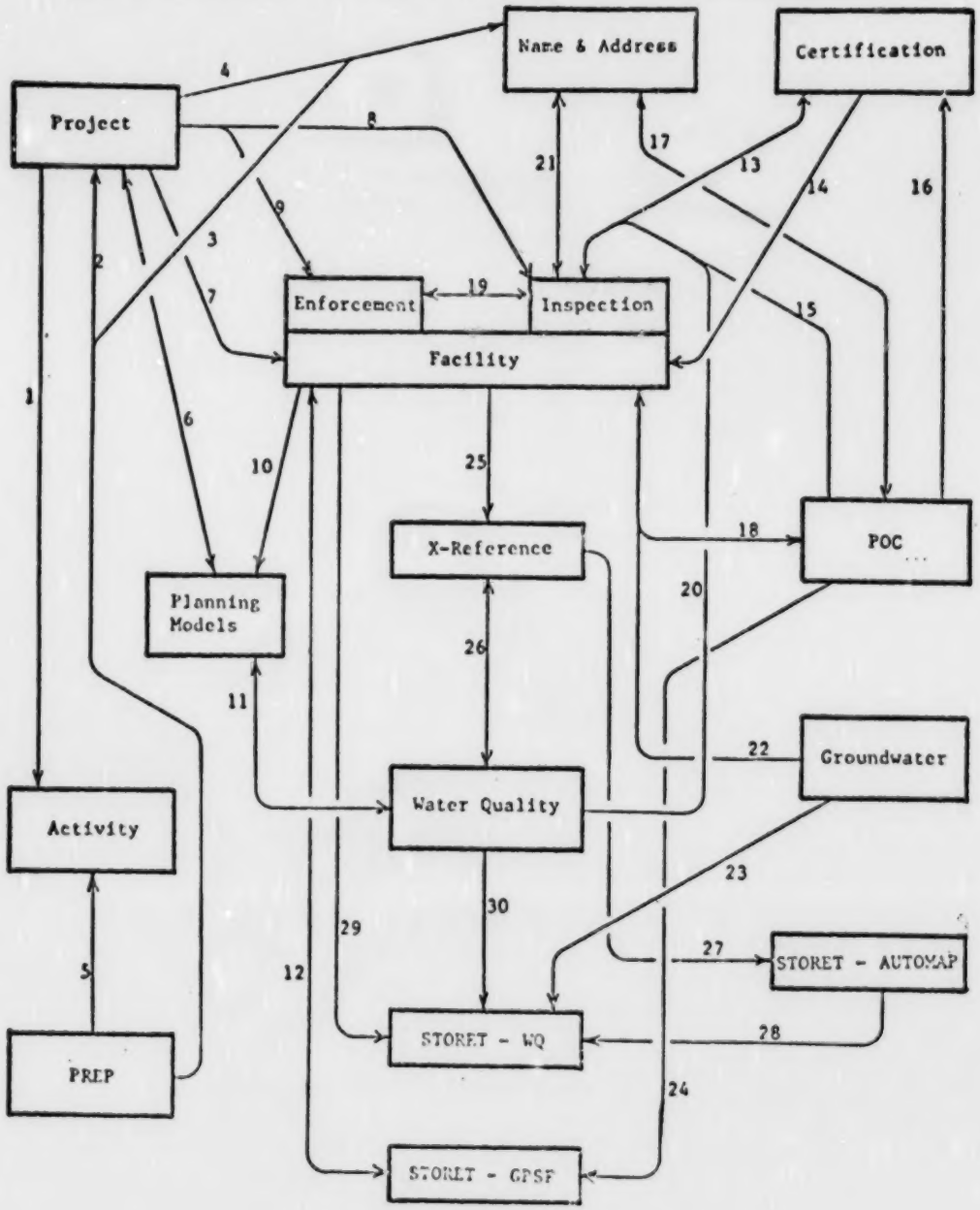

Table 2. WAMIS DATA FLOW ROUTES

---

1. Project to Activity
   - Workload

2. PREP to Project
   - Need for a New Project

3. PREP to Name & Address
   - Consultant
   - Responsible Person
   - Plant

4. Project to Name and Address
   - Consultant
   - Responsible Person
   - Plant

5. PREP to Activity
   - Workload

6. Project to Planning
   - Proposed Projects Descriptions
   - Needs
   - Projects Under Construction

   Planning to Project
   - Need for Project

7. Project to Facility
   - Facility Description

8. Project to Inspection
   - Need for Inspection
     - Schedule Compliance
     - Facility Completion

9. Project to Enforcement
   - Non-Compliance with Schedule

10. Facility to Planning
    - Descriptions of Existing Facilities

    Planning to Facility
    - Recommended Permit Conditions

11. Water Quality to Planning
    - Stream Quality
    - Effluent Quality

    Planning to Water Quality
    - Stream Standards

(continued)

Table 2. (Continued).

---

12. Facility to STORET-GPSF
    - Facility Descriptions
    - Project Needs
    - Enforcement

    STORET-GPSF to Facility
    - Facility Description

13. Inspection to Certification
    - Operator Confirmation
    - Operator Changes

    Certification to Inspection
    - Operator's Name and Class
    - Need for Inspection

14. Certification to Facility
    - Operators Class

15. POC to Inspection
    - Need for Inspection
        - Operator Change
        - Non-Compliance with Standards
        - Approaching Design Limits

16. POC to Certification
    - Operator Identification

17. POC to Name and Address
    - Address Changes

    Name and Address to POC
    - Mailing Labels

18. POC to Facility
    - Changes in System

    Facility to POC
    - Permit Conditions
    - Facility Descriptions

19. Inspection to Enforcement
    - Need for Action
    - Compliance Achieved
    - Confirm Condition

    Enforcement to Inspection
    - Need for Inspection
    - Current Status

(continued)

Table 2. (Continued).

20. Water Quality to Inspection
    - Need for Inspection
    - Background
    - Historical

21. Inspection to Name and Address
    - Address Changes

    Name and Address to Inspection
    - Background

22. Groundwater to Facility
    - Facility Description

23. Groundwater to STORET-WQ
    - Station Description
    - Water Quality (Historical)

24. POC to STORET-GPSF
    - Self Monitoring Reports

25. Facility to X-Reference
    - I.D. Code
    - Lat/Long

26. X-Reference to Water Quality
    - I.D. Code
    - Lat/Long

    Water Quality to X-Reference
    - Lat/Long
    - Existence of Station

27. X-Reference to STORET-AUTOMAP
    - Lat/Long

28. STORET-AUTOMAP to STORET-WQ
    - RMI for Lat/Long

29. Facility to STORET-WQ
    - Station Descriptions

30. Water Quality to STORET-WQ
    - Water Quality

The Activity System, which monitors WAMIS work flow and work load currently, will become computerized. On the other hand, the Project System is expected to be merged with the Facility Status Module or the PREP Module. The Plant Operation Control (POC) and Project Review and Permit (PREP) Modules, as discussed previously, are in the system design state.

The Groundwater System, also referred to as G/WAMIS, was developed independently of the grant. It is a file containing data on all municipal water supply wells and springs. Technical well and spring data, and a limited amount of water quality data are available through the system in a computer printout which contains a complete listing of all facilities. G/WAMIS has no selective retrieval options, and no data manipulation programs are available at this time. Moreover, the G/WAMIS file is not cross-referenced with the WAMIS files. It is expected, however, that with future modification of the system, G/WAMIS will merge with the Facility Status and Water Quality Modules.

The Cross-Reference File of latitude-longitude coordinate data currently is used in conjunction with the Facility Status and Water Quality Modules. Only the STORET-WQ (Water Quality) module of those related to STORET is used. Data flow as currently practiced, from the Water Quality Module to STORET-WQ, will be described in a later section.

The planning module under development will interface with all other WAMIS systems. A waste-load allocation and stream quality model (UDOM) and economic-financial model (ECOFIN) are major components of the planning module. Most data used by these models will be accessed from the WAMIS data base.

The above models are major tools in using the WAMIS data base as a source in developing the long-range comprehensive water quality management plan (COWAMP) for the state. The plan has a direct impact on WAMIS in that it will depend extensively upon an up-to-date data base. Unlike other long-range plans which are often outdated by the time they are printed, COWAMP will interface directly with the department's day-to-day operations as they are reflected in the WAMIS data base. Thus, being a "computer plan" rather than a "paper plan", it can readily respond to physical, social, and economic change. Also, by being interactive with the WAMIS data base, the plan will be able to automatically up-date such items as treatment needs, waste-load allocations, and construction schedules.

In summary, the systems objectives as perceived at project initiation were focused during the first year and consolidated into a comprehensive modularized system design. Subsequent efforts integrated many elements of the modular concept into a more interdependent system; however, throughout this program, the general overall framework of system purposes has been maintained. Moreover, the objectives of providing

operational and usable systems having high priority in terms of Pennsylvania's needs was achieved. Most importantly, the need for using modern EDP in the management of masses of water quality information has been demonstrated and become widely accepted by Bureau of Water Quality Management personnel.

Additionally, a dynamic and flexible system has evolved which permits not only ready modification in order to meet changing state needs, but also has capability for incorporating advances in data systems technology.

SECTION III

SYSTEM DESCRIPTION

BACKGROUND

This section is intended to describe the three modules, Facility Status, Water Quality, and Contact Modules, in terms of system input, output, and uses. The purpose of the system description is twofold. First, it will provide existing users with an overview and thus aid in managing and using WAMIS. Second, it will provide other users with a concise resume of potential uses to which the system may be put in their areas of responsibility, and an indication of the types of input and output necessary for effective use of WAMIS.

FACILITY STATUS MODULE

General Description

The Facility Status Module maintains data which identifies all facilities impinging upon the state's water system and includes approved specification criteria for each facility. Facilities included are: water supplies, bathing places, sewage collection and treatment facilities, and industrial waste treatment facilities. The system maintains and processes (for status reporting and water quality management by exception) the complete inspection and enforcement history for each facility, as well as identification and design criteria.

Table 3 provides a complete list of Facility Status Module input and output forms and reports.

To aid in describing the various inputs and outputs of the module, the following discussion is arranged by form or report.

Input

1. Establishment, Case, and Facility Information -- In order to identify a facility in detail, establishment, case, and facility information must be input into the module by field personnel. Specific coding is required for each level of information in accord with the following precise definitions.

> Establishment - a person or organization responsible for ownership for one or more cases within a physically contiguous location or municipality.
>
> Case - a division of an establishment which performs a distinct function and operates independently of other cases of the establishment.
>
> Facility - that portion of a case which performs a distinct water or wastewater handling function; the lowest functional component of a case.

An example of each level is illustrated by the following: establishment -- Pennsylvania State University, case -- New Kensington Campus, and facility -- extended aeration treatment plant.

In general, the type of information for each level input by field personnel into WAMIS is illustrated in Table 4. As noted in the table, facility information is highly detailed and serves to completely describe a facility for each of the four major program areas: the water supply, bathing places, industrial waste, and sewage programs. For facility information, data which is common to all programs is noted in the table under the "General" category.

Example input forms are shown in Figures 2 through 6.

Specific identification numbers for each establishment, case, and facility are assigned by regional office personnel. Likewise, forms to add, change, or delete any of this information is submitted by the field on an as-needed basis.

Initial collection and coding of this descriptive information is burdensome; however, once incorporated into the system, this information

Table 3. FACILITY STATUS MODULE INPUT AND OUTPUT FORMS AND REPORTS

Input
Establishment Information
Case Information
* Facility Information
* Inspection Reports
* Enforcement Status
STORET Cards
Latitude-Longitude Location Coordinates
Output
Facility File Listing
* Identification Report
* Addendum Report
* Enforcement Status Report
* Enforcement Status Listing
* Management Action -- Enforcement Report
Management Action -- Non-Enforcement Report
Enforcement Activity Report
Enforcement Status Totals
Enforcements in DSE Over One Year
Input Validation Error Listing
Update Master Activity List
STORET Error Listing
Cross Reference Update

* Used most frequently

Table 4. ESTABLISHMENT, CASE AND FACILITY INFORMATION INPUT

Establishment

Name

Ownership

Employer Identification

County

Municipality

Type (e.g., network stations, public or private water supply, pools, beaches, industrial wastes, mines, public or other sewage systems)

Case

Name

Ownership

Population Served

County

Municipality

Type

Establishment Cross-Reference (currently not used)

Latitude-Longitude (currently not used)

Facility

A. General --

Name

Ownership

Topographic Map Number

County

(continued)

Table 4 (continued).

Municipality

Population Served

Municipality Served

Flow

Year of Original Operation

Year of Last Improvement

Construction Cost (year-to-date and total for prior years)

Number of Violations for Previous Year

Weeks Between Inspections

Compliance Status (e.g., compliance, violation-satisfactory progress, violation-unsatisfactory progress)

Permit Coverage

Operational Status

B. Water Supply Program --

Source of Supply

- type (e.g., well, spring, infiltration gallery, natural or artificial lake, stream)
- safe yield
- pump capacity
- primary or secondary supply
- treatment
- aquifers

Treatment Plant

- design year
- design population

(continued)

Table 4 (continued).

---

design maximum flow
design average flow
degree of treatment

Distribution System

design year
design population
design average flow

Transmission Line

length
size
shape
type (e.g., force main, gravity, lift station)
difference in elevation
design year
design population
design maximum flow

Storage Unit

type (e.g., source storage, elevated, standpipe, reservoir)
capacity

C. Bathing Place Program --

Beach

bathing load
drainage area
length
depth

Pool

design year
bathing load
design capacity
source of supply
type of drainage
type of backwash disposal
type of housing

(continued)

Table 4 (continued)

Discharge Point

type (e.g., streams, lakes, ground water)
stream name
length of outfall
drainage area

D. Industrial Waste Program --

Production or Service Unit

SIC Code
type of primary and secondary supply (e.g., well, spring, infiltration gallery, natural or artificial lake, stream, public supply)

Collection System

type (e.g., separate, combined or both)
population equivalent
design maximum flow

Conveyance System

type (e.g., force main, gravity, lift station)
length
size
shape
difference in elevation
population equivalent served
design maximum flow
number of secondary discharges

Treatment Plant

population equivalent
design flow (maximum and average)
design organic load
design suspended solids load
degree of treatment
type treatment required and provided
waste characteristics

(continued)

Table 4 (continued).

Discharge Point

- stream name
- length of outfall
- drainage area

Storage Unit

- type (e.g., lined or unlined impoundment, above or below ground tank)
- capacity

E. Sewage Program --

Collection System

- type of sewer (e.g., separate, combined, or both)
- design year
- design population
- design maximum flow

Interceptor

- type (e.g., force main, gravity, lift station)
- length
- size
- shape
- minimum grade
- design year
- design population
- design maximum flow
- number secondary discharges

Treatment Plant

- design year
- design population
- design flow (maximum and average)
- design organic load
- design suspended solids load
- type of treatment required and provided

Discharge Point

- type
- stream name
- length of outfall
- drainage area

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

COMPLETED BY _____ DATE _____

FIELD OFFICE _____

Figure 2

ESTABLISHMENT INFORMATION
(ALL PROGRAMS)

1	2	3
C	A ☐ Add C ☐ Change D ☐ Delete	A

IDENTIFICATION CODE 4-16					
County	Municipality	Type	Est		
				0 0	0 0 0

ESTABLISHMENT NAME (17–36) _____ OWNERSHIP (37–38) _____ EMPLOYER IDENTIFICATION (39–48) _____

COUNTY _____ MUNICIPALITY _____ PROGRAM _____

CASE INFORMATION
(ALL PROGRAMS)

1	2	3
C	A ☐ Add C ☐ Change D ☐ Delete	C

IDENTIFICATION CODE 4-11			
County	Municipality	Type	Est

CASE NO. (12–13)	(14–16)	CASE NAME (17–36)	OWNER (37–38)	ACT POP SERVED (39–42)	YEAR (43–44)	CROSS REFERENCE 1 (I.D. CODE) (45–57)	CROSS REFERENCE 2 (STORET #) (58–72)
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						
	0 0 0						

Figure 3

ER-SWQ-42 Rev. 2-73

COMPLETED BY _____

FIELD OFFICE _____

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
SANITARY ENGINEERING

DATE _____

ESTABLISHMENT _____

CASE _____

FACILITY INFORMATION

(WATER SUPPLY PROGRAM)

1 — C [A] Add [C] Change [D] Delete

2 — P ALL CARDS THIS SIDE

2 — B ALL CARDS THIS SIDE

ID CODE 6-13: County | Mun | T | Em | Case

SOURCE OF SUPPLY

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County Mun	49-52 Act Pop Serv.	53-54 Year
			INCHES NORTH		INCHES WEST	

55-56 No Mun Serv	57 Flow Status	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Vid	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Blam Imp	74-78 Compliances Fac. Op. Blank Fed Pmt	79-80 OS

14-16 Fac. No	17-18	19 Type	20-23 Safe Yield (Mgd)	24-27 Pump Cap (Mgd)	28 P/S Supply	29-31 Yr. At Source	32-35 Aqu. Mg
	0 1						

36-39 Aqu. Minor

SOURCE OF SUPPLY

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County Mun	49-52 Act Pop Served	53-54 Year
			INCHES NORTH		INCHES WEST	

55-56 No Mun Serv	57 Flow Status	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Vid	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Blam Imp	74-78 Compliances Fac. Op. Blank Fed Pmt	79-80 OS

14-16 Fac. No	17-18	19 Type	20-23 Safe Yield (Mgd)	24-27 Pump Cap (Mgd)	28 P/S Supply	29-31 Yr. At Source	32-35 Aqu. Mg
	0 1						

36-39 Aqu. Minor

TREATMENT PLANT

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County Mun	49-52 Act Pop Serv.	53-54 Year
			INCHES NORTH		INCHES WEST	

55-56 No Mun Serv	57 Flow Status	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Vid	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Blam Imp	74-78 Compliances Fac. Op. Blank Fed Pmt	79-80 OS

14-16 Fac. No	17-18	19-25 Type	26-29 Des Year	30-33 Des Pop	34-37 Des Mo Flow (Mgd)
	0 6				

38-41 Des Av Flow (Mgd) | 42-45 Blank | 46-49 Blank | 50-53 Yr Low R P

DISTRIBUTION SYSTEM

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County Mun	49-52 Act Pop Serv.	53-54 Year
			INCHES NORTH		INCHES WEST	

55-56 No Mun Serv	57 Flow Status	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Vid	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Blam Imp	74-78 Compliances Fac. Op. Blank Fed Pmt	79-80 OS

14-16 Fac. No	17-18	19-22 Des Year	23-26 Des Pop	27-30 Des Avg Flow (Mgd)
	0 4			

TRANSMISSION LINE

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County Mun	49-52 Act Pop Serv.	53-54 Year
			INCHES NORTH		INCHES WEST	

55-56 No Mun Serv	57 Flow Status	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Vid	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Blank	74-78 Blank	79-80 Blank

14-16 Fac. No	17-18	19 Type	20-23 L. (Mi.)	24-26 Size (Ft)	27-28 Shape	29-32 Diff. in Elevation (Mi.)
	0 2					

33-36 Des Year | 37-40 Des Pop | 41-44 Des Mo Flow (Mgd)

STORAGE UNIT

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County Mun	49-52 Act Pop Serv.	53-54 Year
			INCHES NORTH		INCHES WEST	

55-56 No Mun Serv.	57 Flow Status	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Vid	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Blank	74-78 Blank	79-80 Blank

14-16 Fac. No.	17-18	19 Type	20-23 Cap (Mg)
	0 6		

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Figure 4

H710.000 Rev. 6/71

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
SANITARY ENGINEERING

COMPLETED BY _____
FIELD OFFICE _____

DATE _____
ESTABLISHMENT _____
CASE _____

FACILITY INFORMATION

(BATHING PLACES PROGRAM)

1 — C: Add A ☐ Change C ☐ Delete D ☐

2 — F: ALL CARDS THIS SIDE

2 — G: ALL CARDS THIS SIDE

ID CODE 4-13: County | Mun | T | Ear | Case

BEACH

INCHES NORTH — INCHES WEST

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County	Mun	49-52 Act Pop Served	53-54 Year

55-56 Mun Serv	57 Blank	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Yrd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Vio Since Imp	74-78 Compliances Fac	Op	Ice	Fed	Pmt	79-80 O.S.

14-16 Fac. No	17-18	19-22 Bath Load	23-28 Drainage Area (Sq Mi)	29-31 Length (Feet)	32-34 Depth (Feet)
	1 0				

BEACH

INCHES NORTH — INCHES WEST

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County	Mun	49-52 Act Pop Served	53-54 Year

55-56 Mun Serv	57 Blank	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Yrd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Vio Since Imp	74-78 Compliances Fac	Op	Ice	Fed	Pmt	79-80 O.S.

14-16 Fac. No	17-18	19-22 Bath Load	23-28 Drainage Area (Sq Mi)	29-31 Length (Feet)	32-34 Depth (Feet)
	1 0				

POOL

INCHES NORTH — INCHES WEST

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County	Mun	49-52 Act Pop Served	53-54 Year

55-56 Mun Serv	57 Blank	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Yrd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Vio Since Imp	74-78 Compliances Fac	Op	Blank	Blank	Pmt	79-80 O.S.

14-16 Fac. No	17-18	19-22 Dec Year	23-26 Bath Load	27-30 Design Capacity (Mg)	31 Source Water Supply
	1 1				

32 Pool Drainage	33 Back Wash	34 Type Housing

POOL

INCHES NORTH — INCHES WEST

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County	Mun	49-52 Act Pop Served	53-54 Year

55-56 Mun Serv	57 Blank	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Yrd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Vio Since Imp	74-78 Compliances Fac	Op	Blank	Blank	Pmt	79-80 O.S.

14-16 Fac. No	17-18	19-22 Dec Year	23-26 Bath Load	27-30 Design Capacity (Mg)	31 Source Water Supply
	1 1				

32 Pool Drainage	33 Back Wash	34 Type Housing

DISCHARGE POINT

INCHES NORTH — INCHES WEST

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County	Mun	49-52 Act Pop Served	53-54 Year

55-56 Mun Serv	57 Blank	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Yrd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Vio Since Imp	74-78 Compliances Fac	Op	Blank	Blank	Pmt	79-80 O.S.

14-16 Fac. No	17-18	19-20 Type	21-25 Stream Name
	0 7		

36-39 Length of Outfall (Miles)	40-45 Drainage Area (Sq. Mi.)

DISCHARGE POINT

INCHES NORTH — INCHES WEST

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc County	Mun	49-52 Act Pop Served	53-54 Year

55-56 Mun Serv	57 Blank	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Yrd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Vio Since Imp	74-78 Compliances Fac	Op	Blank	Blank	Pmt	79-80 O.S.

14-16 Fac. No	17-18	19-20 Type	21-25 Stream Name
	0 7		

36-39 Length of Outfall (Miles)	40-45 Drainage Area (Sq. Mi.)

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Figure 5

ER712.121 Rev. 6/72

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
WATER QUALITY MANAGEMENT

COMPLETED BY _____ DATE _____

FIELD OFFICE _____ ESTABLISHMENT _____

CASE _____

FACILITY INFORMATION

(INDUSTRIAL WASTE PROGRAM)

1 C Add A Change C Delete D — 2 — 3 F ALL CARDS THIS SIDE — 2 G ALL CARDS THIS SIDE — ID CODE 4-13: Cnty, Mun, T, Est, Case

PRODUCTION OR SERVICE UNIT (INCHES NORTH / INCHES WEST)

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc Cnty	Mun	49-52 Blank	53-54 Blank	14-16 Fac. No	17-18 0 8	19-22 Sic Code	23 Type Pri Sup	24 Type Sec Sup					
55-56 Blank	57 Type Waste	58-59 Yr Orig Op	60-61 Blank	62-65 Blank	66-69 Blank	70-71 Vio Last Year	72-73 Wks Btwn Insp	74-78 Compliances Fac Op Int Blank	Pmt	79-80 Os							

COLLECTION SYSTEM (INCHES NORTH / INCHES WEST)

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc Cnty	Mun	49-52 Blank	53-54 Blank	14-16 Fac. No	17-18 0 3	19 Type	20-23 Blank	24-27 Pop Equiv	28-31 Des Mo Flow (Mgd)				
55-56 Blank	57 Type Waste	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Ytd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Blank	74-78 Compliances Fac Op Int Blank	Pmt	79-80 Os							

CONVEYANCE SYSTEM (INCHES NORTH / INCHES WEST)

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc Cnty	Mun	49-52 Blank	53-54 Blank	14-16 Fac. No	17-18 0 7	19 Type	20-23 L (Mi)	24-26 Size (Fi)	27-28 Shape	29-32 Diff in Elevation (Mi)			
55-56 Blank	57 Type Waste	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Ytd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Blank	74-78 Compliances Fac Op Int Blank	Pmt	79-80 Os	33-36 Blank	37-40 Equiv Pop	41-44 Des Mo Flow (Mgd)	45-46 Sec Discharge			

TREATMENT PLANT (INCHES NORTH / INCHES WEST)

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc Cnty	Mun	49-52 Blank	53-54 Blank	14-16 Fac. No	17-18 0 6	19-25 Type	26-29 Blank	30-33 Eq Pop	34-37 Des Mo Flow (Mgd)				
55-56 Blank	57 Type Waste	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Ytd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Btwn Insp	74-78 Compliances Fac Op Int Blank	Pmt	79-80 Os	38-41 Des Av Flow (Mgd)	42-45 Dur Org Ld (P/D)	46-49 Des S. S. Load (P/D)	50-53 Tr. Lev R P	54-57 Tr. Proc R P		

DISCHARGE POINT (INCHES NORTH / INCHES WEST)

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc Cnty	Mun	49-52 Blank	53-54 Blank	14-16 Fac. No	17-18 0 7	19-20 Type	21-36 Stream Name						
55-56 Blank	57 Type Waste	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Ytd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Btwn Insp	74-78 Compliances Fac Op Int Blank	Pmt	79-80 Os	36-39 Length of Outfall (Miles)	40-45 Drainage Area (Sq. Mi.)					

STORAGE UNIT (INCHES NORTH / INCHES WEST)

14-16 Fac. No	17-36 Facility Name	37-38 Owner	39-43 Map Number	44-48 Act Loc Cnty	Mun	49-52 Blank	53-54 Blank	14-16 Fac. No	17-18 0 5	19 Type	20-23 Cap (Mg)						
55-56 Blank	57 Type Waste	58-59 Yr Orig Op	60-61 Yr Last Imp	62-65 Constr Cost Ytd	66-69 Constr Cost Prior Yrs	70-71 Vio Last Year	72-73 Wks Btwn Insp	74-78 Compliances Fac Op Int Blank	Pmt	79-80 Os							

Figure 6

ER 711.676 Rev. 4/72

COMPLETED BY _____

FIELD OFFICE _____

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
WATER QUALITY MANAGEMENT

FACILITY INFORMATION

(SEWAGE PROGRAM)

DATE _____

ESTABLISHMENT _____

CASE _____

ID CODE 4-13: Cnty | Mun | T | Est | Case

1 C — 2 A Add C Change D Delete — 3 F ALL CARDS THIS SIDE — 3 G ALL CARDS THIS SIDE

COLLECTION SYSTEM — INCHES NORTH — INCHES WEST

14-16 Fac. No. | 17-36 Facility Name | 37-38 Owner | 39-43 Map Number | 44-48 Act Loc Cnty Mun | 49-52 Act Pop Serv. | 53-54 Year | 14-16 Fac. No. | 17-18 0 3 | 19 Type Sewer | 20-23 Des Year | 24-27 Des Pop | 28-31 Des Mx Flow (Mgd)

55-56 No Mun Serv | 57 Blank | 58-59 Yr Orig Op | 60-61 Yr Last Imp | 62-65 Constr Cost Ytd | 66-69 Constr Cost Prior Yrs | 70-71 Vio Last Year | 72-73 Blank | 74-78 Compliances Fac Op Blank Blank Pmt | 79-80 O.S.

COLLECTION SYSTEM — INCHES NORTH — INCHES WEST

14-16 Fac. No. | 17-36 Facility Name | 37-38 Owner | 39-43 Map Number | 44-48 Act Loc Cnty Mun | 49-52 Act Pop Serv. | 53-54 Year | 14-16 Fac. No. | 17-18 0 3 | 19 Type Sewer | 20-23 Des Year | 24-27 Des Pop | 28-31 Des Mx Flow (Mgd)

55-56 No Mun Serv | 57 Blank | 58-59 Yr Orig Op | 60-61 Yr Last Imp | 62-65 Constr Cost Ytd | 66-69 Constr Cost Prior Yrs | 70-71 Vio Last Year | 72-73 Blank | 74-78 Compliances Fac Op Blank Blank Pmt | 79-80 O.S.

INTERCEPTOR — INCHES NORTH — INCHES WEST

14-16 Fac. No. | 17-36 Facility Name | 37-38 Owner | 39-43 Map Number | 44-48 Act Loc Cnty Mun | 49-52 Act Pop Serv. | 53-54 Year | 14-16 Fac. No. | 17-18 0 2 | 19 Type | 20-23 L. (Mi.) | 24-26 Size (Ft) | 27-28 Shape | 29-32 Dif In Grd (Ft/100 Ft)

55-56 No Mun Serv | 57 Blank | 58-59 Yr Orig Op | 60-61 Yr Last Imp | 62-65 Constr Cost Ytd | 66-69 Constr Cost Prior Yrs | 70-71 Vio Last Year | 72-73 Blank | 74-78 Compliances Fac Op Blank Blank Pmt | 79-80 O.S. | 33-36 Des Year | 37-40 Des Pop | 41-44 Des Mx Flow (Mgd) | 45-46 Sec Discharge

INTERCEPTOR — INCHES NORTH — INCHES WEST

14-16 Fac. No. | 17-36 Facility Name | 37-38 Owner | 39-43 Map Number | 44-48 Act Loc Cnty Mun | 49-52 Act Pop Serv. | 53-54 Year | 14-16 Fac. No. | 17-18 0 2 | 19 Type | 20-23 L. (Mi.) | 24-26 Size (Ft) | 27-28 Shape | 29-32 Dif In Grd (Ft/100 Ft)

55-56 No Mun Serv | 57 Blank | 58-59 Yr Orig Op | 60-61 Yr Last Imp | 62-65 Constr Cost Ytd | 66-69 Constr Cost Prior Yrs | 70-71 Vio Last Year | 72-73 Blank | 74-78 Compliances Fac Op Blank Blank Pmt | 79-80 O.S. | 33-36 Des Year | 37-40 Des Pop | 41-44 Des Mx Flow (Mgd) | 45-46 Sec. Discharge

TREATMENT PLANT — INCHES NORTH — INCHES WEST

14-16 Fac. No. | 17-36 Facility Name | 37-38 Owner | 39-43 Map Number | 44-48 Act Loc Cnty Mun | 49-52 Act Pop Serv. | 53-54 Year | 14-16 Fac. No. | 17-18 0 6 | 19-25 Type | 26-29 Des Year | 30-33 Des Pop | 34-37 Des Mx Flow (Mgd)

55-56 No Mun Serv | 57 Blank | 58-59 Yr Orig Op | 60-61 Yr Last Imp | 62-65 Constr Cost Ytd | 66-69 Constr Cost Prior Yrs | 70-71 Vio Last Year | 72-73 Wks Btwn Insp | 74-78 Compliances Fac Op Int Fed Pmt | 79-80 O.S. | 38-41 Des Av Flow (Mgd) | 42-45 Des Org Ld (P/D) | 46-49 Des S. E. Load (P/D) | 50-53 Tr Lev R P

DISCHARGE POINT — INCHES NORTH — INCHES WEST

14-16 Fac. No. | 17-36 Facility Name | 37-38 Owner | 39-43 Map Number | 44-48 Act Loc Cnty Mun | 49-52 Act Pop Serv. | 53-54 Year | 14-16 Fac. No. | 17-18 0 7 | 19-20 Type | 21-35 Stream Name

55-56 No Mun Serv | 57 Blank | 58-59 Yr Orig Op | 60-61 Yr Last Imp | 62-65 Constr Cost Ytd | 66-69 Constr Cost Prior Yrs | 70-71 Vio Last Year | 72-73 Wks Btwn Insp | 74-78 Compliances Fac Op Int Fed Pmt | 79-80 O.S. | 36-39 Length of Outfall (Miles) | 40-45 Drainage Area (Sq. Mi.)

can be readily maintained as a complete description of each facility and as a file of compliance and inspection reports.

2. Inspection Reports -- Inspection reports comprise a major portion of the routine input into WAMIS. Three types of inspection reports are submitted by field inspectors in the regional offices: water supply, public beach, and waste discharge. Table 5 shows the type of information collected by the inspectors and submitted for processing by WAMIS headquarters section. Remarks can be recorded on the inspection forms and are maintained in the regional offices' files. Example report forms are shown in Figures 7 through 9.

In addition to coding of field analyses on the inspection report, a "Water or Waste Quality Report" is prepared. This report will be discussed in detail under the section on the Water Quality Module; however, it is an integral part of the facility inspection.

In the event that non-compliance is noted during an inspection, the nature of the violation is recorded directly on the inspection report and submitted to the regional Compliance and Administration Chief for action. If no violation is obvious as a result of the inspection, the inspection report is held in the regional office until sample analysis results are returned from headquarters. If the facility is in compliance, then the inspection report and the analysis results are forwarded through regional WAMIS personnel to the headquarters WAMIS section for processing.

In the event that the sample analyses reveal that the facility is in violation, then the inspection report and analysis report are sent to the regional Compliance and Administration Chief for action. A violation notification is prepared and sent to the facility's responsible official, and the Compliance and Administration Chief then prepares an Enforcement Status report (to be discussed later) and attaches it to the inspection report and analysis report. This package is then sent through regional WAMIS personnel to the headquarters WAMIS section for processing. Responsibility for enforcement resides within the region.

At stated earlier, inspections provide a major data input to WAMIS. Nearly 18,000 inspections are conducted each year.

The Bureau has issued a detailed and excellent section on coding of data in the "Policy and Procedure Manual". With minimal training, Field Staff can be expected to adequately fill out reports with little chance of error.

3. Enforcement Status -- As indicated above, when a violation is noted during inspection, the regional Compliance and Administration Chief, subsequent to violation notification, submits to WAMIS

Table 5. INSPECTION REPORT INPUT

Water Supply

Date and time of inspection

Establishment and case name

Address

Names of:

- operator
- responsible official
- person interviewed

Telephone numbers

Population served

Current demand (maximum and average)

Number of treatment unit processes (total and in operation)

Violations (including applicable laws and regulations)

Location of sampling point

Field analyses

- pH
- color
- odor
- turbidity
- taste
- chlorides
- fluorides
- coliforms

Inspecting agency

(continued)

Table 5 (continued).

Compliance

- federal
- facility
- operation
- permit coverage

Operational status

Acknowledgement signatures

Public Beach

Date and time of inspection

Establishment and case names

Address

Beach name

Permittee

Person interviewed

Telephone numbers

Source of drinking water

Type of beach

Number of bathers at time of inspection

Number of lifeguards on duty

Lifeguard certificates on file and posting

Electrical certification

Sanitary conditions

(continued)

Table 5 (continued).

Water quality (swimming area and drinking)

- sample location
- coliforms

Swimming water clarity

Inspection agency

Compliance

- facility
- operation
- permit coverage

Operational status

Acknowledgement signatures

Waste Discharge

Date and time of inspection

Establishment and case names

Address

Names of:

- operator
- responsible official
- person interviewed

Telephone numbers

Population served

Acres under permit and already mined
(Mine Drainage Program only)

Types of treatment processes

Number of treatment units
(total and in operation)

(continued)

Table 5 (continued).

Violations (including applicable laws and regulations)
Location of sampling point
Field analyses
pH
chlorine residual
color
odor
temperature
dissolved oxygen
specific conductivity
Average daily flow
Receiving stream appearance
Inspecting agency
Compliance
federal
interstate
facility
operation
permit coverage
Operational status
Acknowledgement signatures

ER-BWO-33 REV. 1-73

NOTE: SEE COPY 2 BEFORE SIGNING

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT

WATER SUPPLY INSPECTION REPORT

Figure 7

DATE _____

TIME _____

ESTABLISHMENT	CASE	LOCATION (STREET/STATE ROUTE)	COUNTY	MUNICIPALITY

OPERATOR NAME	VALID CERTIFICATE POSTED ☐ YES ☐ NO	TELEPHONE NO.	POP SERVED

RESPONSIBLE OFFICIAL	ADDRESS	TELEPHONE NO.

PERSON INTERVIEWED	ADDRESS	TELEPHONE NO.

CURRENT DEMAND (MGD)	
MAXIMUM	AVERAGE

SOURCE OF SUPPLY	NUMBER OF UNITS	
	TOT	IN OP
WELLS		
SPRINGS		
SURFACE WATER		

TREATMENT PROCESS	UNIT PROCESSES		REMARKS
	TOT	IN OP	
IMPOUNDMENT			
COAGULATION			
SETTLING			
FILTRATION			
DISINFECTION			
FLUORIDATION			
SOFTENING			
IRON REMOVAL			
OTHER			

WATER QUALITY LOCATION OF SAMPLING POINT	W & W QUALITY REPORT NUMBER	pH	COLOR	ODOR	TURB	TASTE	Cl_2 MG/l	F MG/l	COLIFORMS MPN/100 ML
A									
B									
C									
D									

VIOLATIONS

LAWS, REGULATIONS OR PERMIT NO. & COND.

PERSON INTERVIEWED (SIGNATURE)

TITLE AND DATE

INVESTIGATOR (SIGNATURE)

TITLE AND DATE

	IDENTIFICATION					FAC NO. 1	FAC NO. 2	FAC NO. 3	FAC NO. 4	DATE OF INSPECTION	INSPECTING AGENCY
	CO	MUN	T	EST	CASE						
1 C											
2 A	4-5	6-8	9	10-11	12-13	14-16	14-16	14-16	14-16	17-22	23-25
3 X											

FACILITY NAME	COMPLIANCE				PERMIT COMP	OPER STAT
	FED	INT	FAC	OP		
	66	67	68	69	70	71-72
1						
2						
3						
4						

ER-BWO-31 REV. 1-73
NOTE: SEE COPY 2
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT

PUBLIC BEACH INSPECTION REPORT

Figure 8

DATE _____
TIME _____

ESTABLISHMENT	CASE	ADDRESS	COUNTY	MUNICIPALITY
NAME OF BEACH	PERMITEE	PERSON INTERVIEWED	TELEPHONE	DRINKING WATER QUALITY/LOC ☐ PUBLIC ☐ PRIVATE

TYPE OF BEACH ☐ STREAM SIDE ☐ IMPOUNDMENT OR LAKE

NAME

NUMBER OF BATHERS AT TIME OF INSPECTION

NUMBER OF LIFEGUARDS ON DUTY

ALL LIFEGUARDS' CERTIFICATES ON FILE ☐ YES ☐ NO

PERMIT CERTIFICATE POSTED ☐ YES ☐ NO

ELECTRICAL CERTIFICATION DATE

	GENERAL SANITATION	SATISFACTORY N/A	YES	NO
A	MEN'S DRESSING ROOMS			
B	MEN'S TOILETS			
C	WOMEN'S DRESSING ROOMS			
D	WOMEN'S TOILETS			
E	REFUSE DISPOSAL			
F	SEWAGE			
G	AREA			

DRINKING WATER QUALITY LOCATION	COLIFORMS MPN/100 ML

SWIMMING WATER QUALITY LOCATION	COLIFORMS MPN/100 ML

VIOLATIONS

SWIMMING WATER CLARITY
☐ CLEAR
☐ TURBID

REMARKS

	IDENTIFICATION CO	MUN	T	EST	CASE	FAC NO. 1	FAC NO. 2	FAC NO. 3	FAC NO. 4	DATE OF INSPECTION	INSPECTING AGENCY
1 C											
2 A	4-5	6-8	9	10-11	12-13	14-16	14-16	14-16	14-16	17-22	23-25
3 X											

RESPONSIBLE OFFICIAL
NAME
ADDRESS
SUMMER WINTER
PERSON INTERVIEWED (SIGNATURE)
TITLE AND DATE
INVESTIGATOR (SIGNATURE)
TITLE AND DATE

FACILITY NAME	COMPLIANCE FED 66	INT 67	FAC 68	OP 69	PERMIT COMP 70	OPER STAT 71-72
1						
2						
3						
4						

REGIONAL OFFICE

ER BWQ 32 REV. 1-73
NOTE: SEE COPY 2
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT

WASTE DISCHARGE INSPECTION REPORT

Figure 9

DATE _____
TIME _____

ESTABLISHMENT	CASE	LOCATION (STREET/STATE ROUTE)	COUNTY	MUNICIPALITY	PROGRAM

OPERATOR NAME	VALID CERTIFICATE POSTED YES ☐ NO ☐	TELEPHONE NO.	POP SERVED	ACRES UNDER PERMIT	ACRES ALREADY MINED
RESPONSIBLE OFFICIAL	ADDRESS	TELEPHONE NO.	INDUSTRIAL PRODUCTS		
PERSON INTERVIEWED	ADDRESS	TELEPHONE NO.	1.	2.	

TREATMENT PROCESS	NUMBER OF UNITS TOT	NUMBER OF UNITS IN OP	REMARKS	VIOLATIONS
				LAWS, REGULATIONS OR PERMIT NO & COND

SAMPLING POINT	W&W QUALITY REPORT NUMBER	pH	CHLOR RES	COLOR	ODOR	TEMP	D.O.	SPEC COND.	AVG. DAILY FLOW (MGD)

RECEIVING STEAM APPEARANCE		
NAME	ABOVE DIS. APP	BELOW DIS. APP

	IDENTIFICATION C	CO	MUN	T	EST	CASE	FAC NO. 1	FAC NO. 2	FAC NO. 3	FAC NO. 4	DATE OF INSPECTION	INSPECTING AGENCY
1	C											
2	A	4-5	6-8	9	10-11	12-13	14-16	14-16	14-16	14-16	17-22	23-25
3	X											

FACILITY NAME	DIS. VOL. (MGD) 49-52	COMPLIANCE FED 66	INT 67	FAC 68	OP 69	PERMIT COMP 70	OPER STAT 71-72
1							
2							
3							
4							

PERSON INTERVIEWED (SIGNATURE)

TITLE AND DATE

INVESTIGATOR (SIGNATURE)

TITLE AND DATE

REPORT OFFICE

headquarters, an Enforcement Status form along with the inspection report and analysis report. Table 6 shows the input information contained in this form. The form used for coding the input information is shown in Figure 10.

This input provides a record of an order or violation, and also provides a means for tracking the status of a variety of enforcement actions.

The Enforcement Status form also provides for step-by-step recording of subsequent steps in an enforcement action. Information on subsequent steps may come to the Bureau from a number of sources, for example. participating in legal conferences, receipt of a schedule, inspections, and initiation of a new legal tactic. Any staff member who learns of a new step completes a narrative and identification portions of the form and passes it to the regional WAMIS section for coding and processing.

4. STORET Cards -- The Bureau had used STORET cards (Figure 11) in order to specifically identify Facility locations. River Mile Index has never been used, thus reporting format has been upgraded and replaced by latitude-longitude only as described in the next paragraph.

5. Latitude-Longitude Location Coordinates -- Two methods are used for reporting location coordinates. The first is by latitude-longitude as shown in Figure 12. The second method reports in inches North and inches West using map codes for greater convenience. The input form for the latter method is shown in Figure 13. Both methods are used to add new location coordinates to the system for facility records. The methods are used when large numbers of facilities have no coordinates and relieves the coder and keypuncher from handling separate forms for each record addition.

Output

The Facility Status Module, which has been operational for nearly two years, has extensive output. Table 3 lists the reports which emanate from the system. The following discussion cites the various output reports and indicates the information contained therein.

1. Facility File Listing and Identification Report -- These two reports are identical in content, only the order in which the facilities are arranged is different. Both reports file the information input from the Facility Information form and correspond exactly to the input shown in Table 4. Because over 36,000 facilities are included in the file and are modified by nearly 18,000 inspections per year, both reports store a considerable amount of information.

The printout sequence for the Facility File Listing is according to identification code (a combination of county, municipality, program, establishment, case and facility codes). The Identification Report,

Table 6. ENFORCEMENT STATUS INPUT

Identification establishment case facility county municipality
Status changes (e.g., add, change, delete)
Date of violation or order notice
Permit number
Type of order or notice
Basis of compliance status (e.g., inspection, report by recipient of order, schedule submitted, not submitted, delayed)
Compliance status
Issuing agency
Action responsibility
Latest enforcement action status
Date of latest action

Figure 10

ER-BWQ-25 Rev. 12-72

Coded By:

Date:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
WATER QUALITY MANAGEMENT

ENFORCEMENT STATUS

Est:

Case:

Fac:

Co:

Twp:

VIOLATIONS		ORDERS/NOTICE
	1 [C]	
Add, Change, Delete	2 [A] [C] [D] circle	Add, Change, Delete
Circle V	3 [V] [S]	Circle S
ID Code	4 [ ] 16	ID Code
Date Viol Notice	17 [ ] 22	Date of Order/Notice
Circle V	23 [V] [D] [S] circle	Ordering Agency, D=DER; S=Other
Permit No.	24 [ ] 30	Permit No.
Date Inspect/Report	31 [ ] 36	--Leave Blank--
Type Viol	37 [ ] 38	Type Order
Seqential Number	39 [ ] 40	Sequential Number
Basis Viol Status	41 [ ] 42	Basis Compl Status
Viol Status	43 [ ]	Compl Status
Kind Facility	44 [ ] 45	Issuing Agency
Viol Category	46 [ ]	-- Leave Blank--
Action By	47 [ ]	Action By
Latest Action	48 [ ] 49	Latest Action
Date of Action	50 [ ] 55	Date of Action
Old Enf Action	56 [ ] 57	Old Enf. Action
Date Old Action	58 [ ] 63	Date Old Action

Priority Code [ ] 64

VERBAL REPORT:

Reg. File/Data Proc/C.O. File

Signature:

Date:

ER-BWQ-40 Rev. 2-73

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Bureau of Water Quality Management

Figure 11

COMPLETED BY _____

STORET CARDS

DATE _____

ESTABLISHMENT	CASE	FACILITY	PROGRAM

R (1) — (CIRCLE ONE) ADD A (2) CHANGE C (2) DELETE D (2) — P (3) — IDENTIFICATION CODE (4–16) — STORET II (17–31) — SEQ (32 33) — (34)

1 – FACILITY
2 – PROJECT
3 – RANDOM SAMPLE

STORET I

MAJ BASIN MIN BASIN RIVER (35–41) — I MILES (42–47) — II INDEX (48–53) MILES (54–59)

III INDEX (60–64) MILES (65–69) — IV INDEX (70–73) MILES (74–78)

Q (3) — V INDEX (35–38) MILES (39–43) — VI INDEX (44–47) MILES (48–52)

VII INDEX (53–56) MILES (57–60) — VIII INDEX (61–64) MILES (65–68)

IX INDEX (69–72) MILES (73–76)

R (3) — X INDEX (35–38) MILES (39–42) — XI INDEX (43–46) MILES (47–50) — XII INDEX (51–54) MILES (55–58)

ER-BWQ-55 Rev. (6/73)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
LOCATION COORDINATES
(LATITUDE & LONGITUDE)

Figure 12

1	2	3	4-5	6-8	9	10-11	12-13	14-16	17-23	24-31	32-33	34
			CTY	MUNIC	P	EST	CASE	FACILITY	LATITUDE	LONGITUDE		
R	A	P								0	0 0	1
	"									"	"	
	"									"	"	
	"									"	"	
	"									"	"	
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										"	"	

ER-BWQ-70 REV. 4/73

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

Figure 13

LOCATION COORDINATES
(INCHES NORTH & INCHES WEST)

BUREAU OF WATER QUALITY MANAGEMENT

1-2-3	4-5	6-8	9	10-11	12-13	14-16	17-20	21-22	23	24	25-28	29-30	31	32-33-34	35-39
	CTY	MUNIC	P	EST	CASE	FACILITY	INCHES NORTH		SEQ		INCHES WEST		SEQ		MAP NO.
R A P								X X		0		X X		0 0 1	

on the other hand, is printed out according to regional office, program type, and county. Figure 14 shows typical Identification Report output. This report is more useful to the regional offices as compared with the Facility File Listing because the Norristown regional office, for example, can identify more quickly key wastewater facilities in Bucks County using the Identification Report format.

2. Addendum Report -- This report permits tracking of the status of of the facility. An extract of information from the Identification Report, the "Addendum Report", concisely lists operations status, facility ID and facility name (Figure 15).

The report is useful in providing a ready reference so that the user does not have to consult the extensive Identification Report to extract this information.

3. Enforcement Status Report, Enforcement Status Listing, and Management Action-Enforcement Report -- The content of these three reports is identical and corresponds with the input from the Enforcement Status form shown in Table 6. Whereas the Enforcement Status Report and Listing file indicates the status of all facilities input, the Management Action-Enforcement Report only lists facilities for which enforcement action is pending. The difference between the Enforcement Status Report and Enforcement Status Listing is the frequency of output. The former is issued monthly while the latter is issued quarterly. All are run on the same computer program and are arranged by regional office, program, and county in the printout. Examples of each are shown in Figures 16, 17, and 18.

Compliance and Administrative chiefs in the regional offices use these reports routinely and extensively to keep abreast of compliance status and required action deadlines.

4. Management Action - Non-Enforcement Report -- Despite the similarity in name with the previously discussed report, output from the Management Action - Non-Enforcement Report is quite different. Information is printed out in terms of:

- identification code
- name
- kind of facility
- date of last inspection
- frequency of inspection
- compliances
  - Facility
  - Operation
  - Interstate
  - Federal
  - Permit coverage
  - Operational status

Figure 14

```
                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A
              D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S          PAGE   1926
                              I D E N T I F I C A T I O N   R E P O R T                                  9/30/73
                                      NORRISTOWN   -   SEWAGE
                                          -BUCKS COUNTY-

CO-MUN-T-ES-CS-FAC        NAME                 OWN     POP   YR    C O M P L I A N C E S

                                                                  ALL-FAC-OP-INT-FED-PEN-OS

*SENSALEM TWP.
09-004-7-02-02-101   EFFL PIPE                 CO          00 03      1  1  0  0  1  04
                     KIND FAC     DISCH PT  NO NUM SERV 00        CONST YTD        0   WKS BET INS 17
                     MAP NO       00-00-0   YR ORIG-OP  70        CONST PRI        0   VIOL YTD    00
                     ACT LOC      09-004    YR LST INP  00        DATE L INSP 06-07-73  VIOL PRIOR 00
                     TYP DSCH PT FLOW STA  LENG OUTFAL   .00      DRAINAGE AR      .0  STREAM NAME NESHAMINY CREEK
                     STORET 2   401006.4-0745441.4
                     STORET 1   00-00-000

*BRISTOL BORO

09-005-7-01-00-000   BRISTOL BORO            MUN                 2   BASIN CODE 1030              DATE LA 03-27-72   EI  0000000000
09-005-7-01-01-000   BRISTOL BORO            MUN     16,000 71   2                 Y        C/R 00-000-0-30-00-000 000000.0-0000000.0
09-005-7-01-01-100   TR PLANT                MUN     16,000 71     2  2  2  0  1  09
                     KIND FAC     TRTMT PL  NO NUM SERV 02        CONST YTD        0   WKS BET INS 17
                     MAP NO       09-24-2   YR ORIG-OP  00        CONST PRI        0   VIOL YTD    01
                     ACT LOC      09-005    YR LST INP  00        DATE L INSP 06-20-73  VIOL PRIOR 00
                     DESIGN YR    0000      DES MAX FL  .0000     DES DRG LD  .0000     TR LEV RWD  05      TR PROC RQD 000
                     DESIGN POP   22,000    DES AVG FL  .0000     DES SS LOAD .0000     TR LEV PROV 05      TR PROC PRO 000
                     STORET 2   400527.0-0745139.0
                     STORET 1   00-00-000

09-005-7-01-01-101   FINAL EFFL PIPE         MUN     16,000 71     1  1  1  0  1  04
                     KIND FAC     DISCH PT  NO NUM SERV 02        CONST YTD        0   WKS BET INS 17
                     MAP NO       09-24-2   YR ORIG-OP  00        CONST PRI        0   VIOL YTD    00
                     ACT LOC      09-005    YR LST INP  00        DATE L INSP 06-20-73  VIOL PRIOR 00
                     TYP DSCH PT FLOW STA  LENG OUTFAL   .00      DRAINAGE AR      .0  STREAM NAME DELAWARE R
                     STORET 2   400515.0-0745116.0
                     STORET 1   00-00-000

09-005-7-01-01-300   COLL SYS        IDO     MUN     16,000 71     1  1  1  0  1  04
                     KIND FAC     COLL SYS  NO NUM SERV 02        CONST YTD        0   WKS BET INS 00
                     MAP NO       09-24-2   YR ORIG-OP  00        CONST PRI        0   VIOL YTD    00
                     ACT LOC      09-005    YR LST INP  00        DATE L INSP 06-20-73  VIOL PRIOR 00
                     TYPE SEWER   SEPARATE  DESIGN YEAR 0000      DESIGN POP   23000    DES MAX FL  .0000
                     STORET 2   400600.0-0745036.0
                     STORET 1   00-00-000

*BRISTOL TWP.
```

Figure 14 (continued)

```
                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A
              D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S          PAGE   1027
                          I D E N T I F I C A T I O N   R E P O R T                                 9/30/73
                                  NORRISTOWN   -     SEWAGE
                                     -BUCKS COUNTY-

CO-MUN-T-ES-CS-FAC        NAME              OWN     POP   YR    C O M P L I A N C E S

                                                                ALL-FAC-OP-INT-FED-PER-OS

*BRISTOL TWP.
09-001-7-01-00-000   L B C J M A            AUTH                 1   BASIN CODE 1030            DATE LA 03-22-72   EI   0000000000

09-001-7-01-01-000   L B C J M A            AUTH   85,000 71     1                  Y       C/R 00-000-0-00-00-000 000000.0-0000000.0

09-001-7-01-01-100   TR PLANT               AUTH   85,000 71       1   1  0   0   1  04
                     KIND FAC     TRTMT PL  NO MUN SERV 04        CONST YTD          0   WKS BET INS 17
                     MAP NO       08-24-3   YR ORIG-OP  52        CONST PRI    000,000   VIOL YTD    01
                     ACT LOC      09-001    YR LST INP  69        DATE L INSP 07-31-73   VIOL PRIOR  00
                     DESIGN YR    1975      DES MA PL  1300000.   DES ORG LD  14000.00   TR LEV RQD  05        TR PROC RQD 000
                     DESIGN POP   100,000   DES AVG PL  1000000.  DES SS LOAD  .0000     TR LEV PROV 05        TR PROC PRO 000
                     STORET 2     400757.8-0744930.1
                     STORET 1     00-00-000

09-001-7-01-01-101   EFFL PIPE              AUTH   85,000 71       1   1  0   0   1  04
                     KIND FAC     DISCH PT  NO MUN SERV 04        CONST YTD          0   WKS BET INS 17
                     MAP NO       09-24-3   YR ORIG-OP  52        CONST PRI          0   VIOL YTD    00
                     ACT LOC      09-001    YR LST INP  05        DATE L INSP 05-23-73   VIOL PRIOR  00
                     TYP DSCH PT FLOW STR   LENG OUTFAL    .00    DRAINAGE AR        .0  STREAM NAME DELAWARE R
                     STORET 2     400742.-0754527.0
                     STORET 1     00-00-000

09-001-7-01-01-300   LEVITTOWN              AUTH        00 00       1   1  0   0   1  04
                     KIND FAC     COLL SYS  NO MUN SERV 04        CONST YTD          0   WKS BET INS 00
                     MAP NO       09-24-3   YR ORIG-OP  00        CONST PRI          0   VIOL YTD    01
                     ACT LOC      09-001    YR LST INP  00        DATE L INSP 03-10-73   VIOL PRIOR  05
                     TYPE SEWER   SEPARATE  DESIGN YEAR 0000      DESIGN POP    71000    DES MAX FL  .0000
                     STORET 2     400905.2-0745029.7
                     STORET 1     00-00-000

09-001-7-01-01-305   BRISTOL TWP.   ICC   PUM         00 00       1   1  0   0   1  04
                     KIND FAC     COLL SYS  NO MUN SERV 01        CONST YTD          0   WKS BET INS 00
                     MAP NO       08-24-2   YR ORIG-OP  00        CONST PRI          0   VIOL YTD    00
                     ACT LOC      09-001    YR LST INP  73        DATE L INSP 00-00-00   VIOL PRIOR  00
                     TYPE SEWER   SEPARATE  DESIGN YEAR 0000      DESIGN POP         0   DES MAX FL  .0000
                     STORET 2     400815.5-0745029.6
                     STORET 1     00-00-000
```

Figure 15

FAPR63

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
ADDENDUM REPORT

PAGE 300

COUNTY WESTMORELAND COUNTY | REGION PITTSBURGH | PROG OTHER SEWAGE | DATE 09/30/73

CO-MUN-T-ES-CS-FAC	ESTABLISHMENT NAME / CASE NAME / FACILITY NAME	OPERATIONS STATUS
ROSTRAVER TWP.	(CONTINUED)	
101	8" CAST IRON	04-SATISFACTORY OPERATION
SALEM TWP.		
65-952-8-01	CONSOLIDATED GAS SUP	
-01	COMPANY HOUSING STP	
100	SEPTIC TK SAND FLTR	04-SATISFACTORY OPERATION
101	6" VCP OUTFALL	04-SATISFACTORY OPERATION
-02	COMPRESSOR STAT STP	
100	SEPTIC TANK SAND FIL	04-SATISFACTORY OPERATION
101	6" VCP OUTFALL	04-SATISFACTORY OPERATION
65-952-8-02	FORBES MOBILE PARK	
-01	FORBES MOBILE PK STP	
100	AERATION POLISHING	03-OTHER REASON
101	DISCHARGE PIPE	03-OTHER REASON
65-952-8-03	TEXTRON INC	
-01	TEXTRON INC SEWAGE S	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-952-8-04	GRNSBG SALEM SCH DIS	
-01	METZGAR ELEM SCH STP	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-952-8-05	LAMPLIGHTER REST INC	
-01	LAMPLIGHTER SEWAGE S	
100	EXTENDED AERATION	01-NOT READY FOR OPERATION
101	OUTFALL PIPE	01-NOT READY FOR OPERATION
65-952-8-06	TORO DEVELOP CORP	
-01	TORO CORP SEWAGE S	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
SEWICKLEY TWP.		
65-954-8-01	WESTNGHSE ELEC CORP	
-01	WALTZ MILL A R D STP	
100	INHOFF TR&EXTEND AIR	04-SATISFACTORY OPERATION
101	OUTFALL PIPE TO TRIB	04-SATISFACTORY OPERATION
65-954-8-04	INTERNATL PAPER CO	
-01	YUKON PLANT	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	CONCRETE HEADWALL	04-SATISFACTORY OPERATION
65-954-8-05	YOUGH SCHOOL DIST	
-01	SEW AREA JT HIGH SCH	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	CONCRETE HEADWALL	04-SATISFACTORY OPERATION
65-954-8-06	SEWK PINES MANOR MHP	
-01	SEWICKLEY PINES STP	
100	EXT AER&POLISHING PD	04-SATISFACTORY OPERATION
101	OUTFALL PIPE TO TRIB	04-SATISFACTORY OPERATION
SOUTH HUNTINGDON TWP.		

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Figure 15 (continued)

PAPR03

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
ADDENDUM REPORT

PAGE: 301

COUNTY WESTMORELAND COUNTY | REGION PITTSBURGH | PROG OTHER SEWAGE | DATE 09/30/78

COMMUNITY-DS-CS-FAC	ESTABLISHMENT NAME / CASE NAME / FACILITY NAME	OPERATIONS STATUS
SOUTH HUNTINGDON TWP.	(CONTINUED)	
65-955-3-01	BORON OIL CO	
-01	YUKON STATION	
100	EXT AIR & SAND FLTRS	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
ST CLAIR TWP.		
65-957-[illegible]-01	LAUREL VALLEY SCH TP	
-01	LAUREL VALLEY STP	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	OUTFALL PIPE	04-SATISFACTORY OPERATION
UNITY TWP.		
65-959-8-01	MT VIEW ELEM SCHOOL	
-01	MT VIEW ELEM SCH SS	
100	EXTEND AER & MICRO S	01-NOT READY FOR OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-959-8-02	ST JOSEPH HOME	
-01	ST JOSEPH HOME STP	
100	SEPTIC TK & SAND FILTR	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-959-8-04	MT VIEW HOTEL	
-01	MT VIEW HOTEL SS	
100	SEPTIC TK TRICKLE FTR	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-957-8-08	WEST CO AIRPORT AUTH	
-01	WEST CO AIRPORT STP	
100	EX AERATED SAND FILT	01-NOT READY FOR OPERATION
101	DISCHARGE PIPE	01-NOT READY FOR OPERATION
UPPER BURRELL TWP.		
65-960-3-01	ALUMINUM CO OF AMER	
-01	NEW TECHNICAL CTR	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-960-8-02	PENN STATE UNIVERSITY	
-01	NEW WASHINGTON CAMPUS	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
WASHINGTON TWP.		
65-961-8-01	WEST PENN POWER CO	
-01	VANDERGRIFT DIST HQ	
100	SEPTIC TK IN SAND FL	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION
65-961-8-02	WASH TWP SCH DISTRIC	
-01	N WASHINGTON ELEM SCH	
100	EXTENDED AERATION	04-SATISFACTORY OPERATION
101	DISCHARGE PIPE	04-SATISFACTORY OPERATION

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Figure 16

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                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                                    PAGE      650
              D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S                    REPORT DATE  2/ 4/74
                    E N F O R C E M E N T   S T A T U S   R E P O R T                                       PREV RPT DTE 12/31/73
                          WILLIAMSPORT -      SEWAGE
                                -CENTRE COUNTY-

CO-MUN-T-ES-CS-FAC        ESTABLISHMENT                CASE                    FACILITY          C O M P L I A N C E S

                                                                                                  FAC-OP-INT-FED-PER-OS

*BELLEFONTE BORO
*BELLEFONTE BORO
14-802-7-01-01-100     BELLFONTE MSA   EST      BELLFONTE MSA   CAS      B CONT STAB                1   1  0   0   1  04
   DEPARTMENT ORDER:   PRIORITY: *** 4 ***                                                                LAST-INSPECT 11-16-73
     DATE NOTICE: 10-12-73    TYPE ORD/VN: TERTIARY    BASIS STATUS:NO SCD      ISS. AGENCY: CENT OFF                  0- 0- 0
     PERMIT NO:   266S009     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT                 OPERATION   ACTION BY:   REG OFFICE
     STATUS:
        10-12-73 RESPONSE PERIOD        10-25-73 HEAR REQUESTED          - -                                  - -

14-802-7-01-01-100     BELLFONTE MSA   EST      BELLFONTE MSA   CAS      B CONT STAB                1   1  0   0   1  04
   VIOLATION:          PRIORITY: *** 3 ***                                                                LAST-INSPECT 11-16-73
     DATE NOTICE: 10-23-73    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: TRTMT PL    INSP/REPT:   09-14-73
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
     STATUS:
        10-23-73 VN NOTICE GIVEN        - -                                  - -                                  - -

14-802-7-01-01-101     BELLFONTE MSA   EST      BELLFONTE MSA   CAS      TREATED EFF      100       1   3  0   0   1  05
   VIOLATION:          PRIORITY: *** 4 ***                                                                LAST-INSPECT 11-16-73
     DATE NOTICE: 05-16-72    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: TRTMT PL    INSP/REPT:   03-15-72
     PERMIT NO:   266S009     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
     STATUS:
        08-10-72 VN NOTICE GIVEN        - -                                  - -                                  - -

*BENNER TWP.
14-904-7-01-01-100     UNIV AREA JT AU EST      UNIV AREA JT AU CAS      TERT TREATMENT             1   1  0   0   1  04
   DEPARTMENT ORDER:   PRIORITY: *** 4 ***                                                                LAST-INSPECT 09-13-73
     DATE NOTICE: 10-25-68    TYPE ORD/VN: TERTIARY    BASIS STATUS:HEARING     ISS. AGENCY: SWD                       0- 0- 0
     PERMIT NO:   267S003     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   ATTY HBG C
     STATUS:
        11-12-68 HEAR REQUESTED         05-11-71 HEAR DENIED/WITHDRAW  09-15-71 ADJ WON                  07-06-73 REF ATTY FOR APP ACT

*FERGUSON TWP.
14-910-7-01-01-100     FERGUSON TWP AT EST      FERGUSON TWP AT CAS      EXT AERATION               1   3  0   0   1  05
   DEPARTMENT ORDER:   PRIORITY: *** 4 ***                                                                LAST-INSPECT 12-20-73
     DATE NOTICE: 10-25-68    TYPE ORD/VN: TERTIARY    BASIS STATUS:NO SCD      ISS. AGENCY: HOT ISSU                  0- 0- 0
     PERMIT NO:   0026455     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT                 OPERATION   ACTION BY:   REG OFFICE
     STATUS:
        10-25-68 SCD RETURNED           05-24-73 ENF CONF                06-15-73 SCD SUBMITTED                - -
```

Figure 16 (continued)

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                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                                    PAGE      761
              D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S                    REPORT DATE  2/ 4/74
                      E N F O R C E M E N T   S T A T U S   R E P O R T                                    PREV RPT DTE 12/31/73
                              PITTSBURGH  - INDUSTRIAL WASTE
                                      -BEAVER COUNTY-

CO-MUN-T-ES-CS-FAC        ESTABLISHMENT                CASE                    FACILITY          C O M P L I A N C E S

                                                                                                  FAC-OP-INT-FED-PER-OS

*FREEDOM BORO
*FREEDOM BORO
04-809-5-01-01-010      ASHLAND OIL&REFIN CO      VALVOLINE OIL CO          OIL REFINERY                1  1  1  1  4  04
   VIOLATION:           PRIORITY: *** 3 ***                                                                LAST-INSPECT 01-18-73
     DATE NOTICE: 03-13-72    TYPE ORD/VN: DVN LAW     BASIS STATUS:SCD SUBMTD  VIOL FACLTY: PR/SV UN      INSP/REPT:   00-00-00
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG  VN-CATEGORY: FACILITY      ACTION BY:   REG OFFICE
     STATUS:
        06-08-72 REF ATTY FOR APP ACT  01-03-73 STIP AGREED TO        01-11-73 VN NOTICE GIVEN          - -

04-809-5-01-01-013      ASHLAND OIL&REFIN CO      VALVOLINE OIL CO          SEEPS FROM RIVER BAN        3  0  3  0  3  03
   VIOLATION:           PRIORITY: *** 3 ***                                                                LAST-INSPECT 01-18-73
     DATE NOTICE: 01-18-73    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: DISCH PT      INSP/REPT:   01-18-73
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: FACILITY      ACTION BY:   REG OFFICE
     STATUS:
        09-26-73 REF ATTY FOR APP ACT    - -                                  - -                          - -

*GREENE TWP.
04-933-5-02-01-011      PEGGS RUN COAL  EST       PEGGS RUN COAL  CAS       SETTLING POND 3             1  3  3  0  1  05
   VIOLATION:           PRIORITY: *** 3 ***                                                                LAST-INSPECT 01-10-72
     DATE NOTICE: 02-25-71    TYPE ORD/VN: DVN LAW     BASIS STATUS:HEARING     VIOL FACLTY: TRTMT PL      INSP/REPT:   02-10-71
     PERMIT NO:   0470209     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: OPERATION     ACTION BY:   ATTY PITT
     STATUS:
        09-08-71 SUMMARY WON          11-01-71 STIP BEING NEGO ATTY  10-10-72 REF FOR CIV PEN HEAR      - -

*HANOVER TWP.
04-934-5-01-01-012      THOMAS WRIGHT             THOMAS WRIGHT             WRIGHT FARM                 3  0  3  0  3  03
   VIOLATION:           PRIORITY: *** 1 ***                                                                LAST-INSPECT 06-13-73
     DATE NOTICE: 06-13-73    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: DISCH PT      INSP/REPT:   06-11-73
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: FACILITY      ACTION BY:   REG OFFICE
     STATUS:
        06-13-73 REF ATTY FOR APP ACT    - -                                  - -                          - -

*KOPPEL BORO
04-940-5-01-01-031      BABCOCK WILCOX  EST       BABCOCK WILCOX  CAS       24- CONCRETE                3  0  3  0  3  03
   VIOLATION:           PRIORITY: *** 3 ***                                                                LAST-INSPECT 04-26-73
     DATE NOTICE: 03-15-72    TYPE ORD/VN: DVN LAW     BASIS STATUS:SCD SUBMTD  VIOL FACLTY: DISCH PT      INSP/REPT:   02-04-72
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG  VN-CATEGORY: FACILITY      ACTION BY:   ATTY PITT
     STATUS:
        03-15-72 VN NOTICE GIVEN       03-20-72 COMPL LTR SUBMITTED   08-21-72 REF ATTY FOR APP ACT  12-16-72 STIP AGREED TO

        12-19-72 RETURNED TO BUREAU      - -                                  - -                          - -
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Figure 17

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                    COMMONWEALTH OF PENNSYLVANIA                                                    PAGE    1034
                DEPARTMENT OF ENVIRONMENTAL RESOURCES                                          REPORT DATE  9/30/73
                    ENFORCEMENT STATUS LISTING
                          WILLIAMSPORT -      SEWAGE
                                -LYCOMING COUNTY-

CO-MUN-T-ES-CS-FAC        ESTABLISHME                 CASE                    FACILITY          C O M P L I A N C E S

                                                                                                FAC-OP-INT-MED-PER-OS

*MONTGOMERY BORO
41-933-7-01-01-100      MONTGRY WES AUT EST      MONTGRY WES AUT CAS      SETTLING & CHEMICAL      1  1  0  0  1  04
   VIOLATION:           PRIORITY: *** & ***
    DATE NOTICE: 10-06-72    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: TRTMT PL    INSP/REPT:   10-06-72
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: RECT ACHVD  VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        11-09-72 REF ATTY FOR APP ACT  11-10-72 RETURNED TO BUREAU    08-09-73 COMPLIANCE ACHIEVED      - -

41-933-7-01-01-101      MONTGRY WES AUT EST      MONTGRY WES AUT CAS      TREATED EFFLUENT 100     1  1  0  0  1  04
   VIOLATION:           PRIORITY: *** & ***
    DATE NOTICE: 10-06-72    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: DISCH PT    INSP/REPT:   10-06-72
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: RECT ACHVD  VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        11-09-72 REF ATTY FOR APP ACT  11-10-72 RETURNED TO BUREAU    08-09-73 COMPLIANCE ACHIEVED      - -

41-933-7-01-01-200      MONTGRY WES AUT EST      MONTGRY WES AUT CAS      MONTGOMERY PNT   100     1  1  0  0  1  04
   VIOLATION:           PRIORITY: *** & ***
    DATE NOTICE: 10-06-72    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: CONV SYS    INSP/REPT:   10-06-72
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: RECT ACHVD  VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        11-09-72 REF ATTY FOR APP ACT  08-09-73 COMPLIANCE ACHIEVED      - -                                  - -

*MUNCY BORO
41-804-7-01-01-100      MUNCY MSA        EST      MUNCY MSA        CAS      IMHOFF TANKS             1  1  0  0  1  04
   DEPARTMENT ORDER:    PRIORITY: ***    ***
    DATE NOTICE: 08-18-69    TYPE ORD/VN: SECONDARY   BASIS STATUS:GR/PLN DLY  ISS, AGENCY: SWB                      0- 0- 0
    PERMIT NO:   0008190     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        02-07-72 SCD SUBMITTED      - -                                  - -                                  - -

*WILLIAMSPORT
41-001-7-01-01-100      WMSPT S AV CENT EST      WMSPT S AV CENT CAS      AERATION SETTLING        1  1  0  0  1  04
   DEPARTMENT ORDER:    PRIORITY: ***    ***
    DATE NOTICE: 06-20-68    TYPE ORD/VN: COMBINED    BASIS STATUS:NO SCD      ISS, AGENCY: SWB                      0- 0- 0
    PERMIT NO:   0007144     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT                  OPERATION   ACTION BY:   ATTY HBG C
    STATUS:
        04-08-72 PRELIM INJ INITIATED  05-23-73 ORDER SUPERCEDED      - -                                  - -
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Figure 17 (continued)

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                    C O M M O N W E A L T H  O F  P E N N S Y L V A N I A                                    PAGE    1340
                D E P A R T M E N T  O F  E N V I R O N M E N T A L  R E S O U R C E S                  REPORT DATE  9/30/73
                    E N F O R C E M E N T  S T A T U S  L I S T I N G
                              PITTSBURGH -      SEWAGE
                                -FAYETTE COUNTY-

CO-MUN-T-ES-CS-FAC        ESTABLISHMENT                 CASE                    FACILITY          C O M P L I A N C E S
                                                                                                  FAC-OP-INT-FED-PER-OS

*GERMAN TWP,
*GERMAN TWP,
26-910-7-01-01-101     GERMAN TWP                 GERMAN TWP SS          NUMEROUS RAW DISCHAR      1  0  0  0  3  03
   DEPARTMENT ORDER:   PRIORITY: *** 3 ***
   DATE NOTICE: 04-27-72    TYPE ORD/VN: 203A&203B   BASIS STATUS:SCD SUBMTD  ISS, AGENCY: CENT OFF                  0- 0- 0
   PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   ATTY HBG C
   STATUS:
      05-12-72 HEAR REQUESTED        12-08-72 SCD SUBMITTED          - -                                  - -

*JEFFERSON TWP,
26-920-7-01-01-101     JEFFERSON TWP              JEFFERSON TWP SS       MULTIPLE RAW DISCHAR      1  0  0  0  3  03
   DEPARTMENT ORDER:   PRIORITY: *** 3 ***
   DATE NOTICE: 04-27-72    TYPE ORD/VN: 203A&203B   BASIS STATUS:SCD SUBMTD  ISS, AGENCY: CENT OFF                  0- 0- 0
   PERMIT NO:   0000000     SEQUENCE #:  02          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
   STATUS:
      05-12-72 HEAR REQUESTED        12-28-72 SETTLEMENT/CONSENT    01-04-73 SCD SUBMITTED          - -

26-920-7-01-01-101     JEFFERSON TWP              JEFFERSON TWP SS       MULTIPLE RAW DISCHAR      1  0  0  0  3  03
   DEPARTMENT ORDER:   PRIORITY: *** 3 ***
   DATE NOTICE: 04-27-72    TYPE ORD/VN: 203A        BASIS STATUS:SCD SUBMTD  ISS, AGENCY: CENT OFF                  0- 0- 0
   PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
   STATUS:
      11-13-72 RESPONSE PERIOD       12-28-72 SETTLEMENT/CONSENT    01-04-73 SCD SUBMITTED          - -

*LUZERNE TWP,
26-922-7-01-01-101     LUZERNE TWP SUPERVOR       LUZERNE TWP SUPERVOR   OUTFALL PIPES TO R        2  0  2  2  3  03
   DEPARTMENT ORDER:   PRIORITY: *** 3 ***
   DATE NOTICE: 04-27-72    TYPE ORD/VN: 203B        BASIS STATUS:SCD SUBMTD  ISS, AGENCY: CENT OFF                  0- 0- 0
   PERMIT NO:   0008146     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
   STATUS:
      05-12-72 HEAR REQUESTED        06-29-72 ADJ WON               12-08-72 SCD SUBMITTED          - -

26-922-7-01-01-101     LUZERNE TWP SUPERVOR       LUZERNE TWP SUPERVOR   OUTFALL PIPES TO R        2  0  2  2  3  03
   DEPARTMENT ORDER:   PRIORITY: ***  ***
   DATE NOTICE: 04-27-72    TYPE ORD/VN: 203B        BASIS STATUS:SCD SUBMTD  ISS, AGENCY: CENT OFF                  0- 0- 0
   PERMIT NO:   0008146     SEQUENCE #:  02          VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
   STATUS:
      04-27-72 SCD SUBMITTED          - -                                  - -                                  - -
```

Figure 18

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                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                                  PAGE      240
              D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S                  REPORT DATE  9/30/73
                    M A N A G E M E N T   A C T I O N - E N F O R C E M E N T                              PREV RPT DTE
                                   KINGSTON  - INDUSTRIAL WASTE
                                      -TIOGA COUNTY-

CO-MUN-T-ES-CS-FAC        ESTABLISHMENT              CASE                    FACILITY          C O M P L I A N C E S

                                                                                              FAC-OP-INT-CED-PER-OS

*DELMAR TWP.
*DELMAS TWP.
59-911-2-02-01-010     DRESSER MFG DIV EST      DRESSER MFG DIV CAS      VALVES-PIPE FITTINGS      3   3  1   1   1  04
  VIOLATION            PRIORITY: ***   ***                                                        NO ACTIVITY 6 MONTHS
    DATE NOTICE: 04-26-72    TYPE ORD/VN: DVN LAK     BASIS STATUS: INSPECTION  VIOL FACLTY: PR/SV UN    INSP/REPT:   03-14-72
    PERMIT NO:   0000000     SEQUENCE #: 01           VN/CPL STAT: VN UNSAT     VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        04-26-72 RESPONSE PERIOD        09-25-72 REF FOR CIV PEN HEAR   -  -                          -  -

*LIBERTY TWP.
59-924-3-01-01-011     E SMITHFIELD PM EST      E SMITHFIELD PM CAS      AERAT SETTLING TANKS      1   3  1   0   1  04
  VIOLATION            PRIORITY: *** 1 ***                                                        NO ACTIVITY 6 MONTHS
    DATE NOTICE: 12-07-72    TYPE ORD/VN: DVN LAK     BASIS STATUS: RETN LETTR  VIOL FACLTY: TRTMT PL    INSP/REPT:   12-07-72
    PERMIT NO:   0026211     SEQUENCE #: 01           VN/CPL STAT: VN SAT PRG   VN-CATEGORY: OPERATION   ACTION BY:   ATTY HSG C
    STATUS:
        12-20-72 STIP BEING NEGD ATTY   -  -                                  -  -                      -  -

*MELLSBORO BORO
59-[illegible]-1-01-011     CORNING GLASS   EST      CORNING GLASS   CAS      NEUTRALIZATION-SETTL      1   1  1   0   1  04
  DEPARTMENT ORDER:    PRIORITY: *** 1 ***                                                        NO ACTIVITY 6 MONTHS
    DATE NOTICE: 09-01-71    TYPE ORD/VN: PIPP        BASIS STATUS: RETN LETTR  ISS. AGENCY: CENT OFF                 0- 0- 0
    PERMIT NO:   0026311     SEQUENCE #: 01           VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        02-01-72 ENF CONF               10-17-72 SCD SUBMITTED        03-15-73 STIP AGREED TO          -  -

59-802-5-01-01-011     CORNING GLASS   EST      CORNING GLASS   CAS      NEUTRALIZATION-SETTL      1   1  1   0   1  04
  DEPARTMENT ORDER:    PRIORITY: *** 1 ***                                                        NO ACTIVITY 6 MONTHS
    DATE NOTICE: 09-01-71    TYPE ORD/VN: PIPP        BASIS STATUS: RETN LETTR  ISS. AGENCY: CENT OFF                 0- 0- 0
    PERMIT NO:   0001363     SEQUENCE #: 02           VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        02-01-72 ENF CONF               10-17-72 SCD SUBMITTED        03-15-73 STIP AGREED TO          -  -

59-802-5-01-01-011     CORNING GLASS   EST      CORNING GLASS   CAS      NEUTRALIZATION-SETTL      1   1  1   0   1  04
  DEPARTMENT ORDER:    PRIORITY: *** 1 ***                                                        NO ACTIVITY 6 MONTHS
    DATE NOTICE: 09-01-71    TYPE ORD/VN: PIPP        BASIS STATUS: RETN LETTR  ISS. AGENCY: CENT OFF                 0- 0- 0
    PERMIT NO:   2691002     SEQUENCE #: 03           VN/CPL STAT: VN SAT PRG                OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        02-01-72 ENF CONF               10-17-72 SCD SUBMITTED        03-15-73 STIP AGREED TO          -  -
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Figure 18 (continued)

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                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                                    PAGE     375
                D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S                  REPORT DATE  9/30/73
                M A N A G E M E N T   A C T I O N - E N F O R C E M E N T                                  PREV RPT DTE
                                  LEWISTOWN  - INDUSTRIAL WASTE
                                   -CUMBERLAND COUNTY-

CD-MUN-T-ES-CS-FAC        ESTABLISHMENT                CASE                    FACILITY          C O M P L I A N C E S

                                                                                                  FAC-OP-INT-FED-PER-OS

*EAST PENNSBORO TWP.
*EAST PENNSBORO TWP.
21-909-5-01-02-013      PENN CENTRAL RR EST      PENN CENTRAL R R        6" ARCH PUMP          1  3  0  0  1  05
  VIOLATION:            PRIORITY: *** 3 ***                                                     NO ACTIVITY 6 MONTHS
    DATE NOTICE: 03-14-69    TYPE ORD/VN: DVN LAW     BASIS STATUS:NOT ON SCD  VIOL FACLTY: DISCH PT    INSP/REPT:   03-13-69
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: PERMIT      ACTION BY:   ATTY HBG C
    STATUS:
        03-14-69 VN NOTICE GIVEN        03-17-69 SCD SUBMITTED          04-24-69 VN NOTICE GIVEN        11-12-69 ENF CONF

        11-21-69 VN NOTICE GIVEN        12-01-69 COMPL LTR SUBMITTED    02-10-70 VN NOTICE GIVEN        02-19-70 COMPL LTR SUBMITTED

        03-09-70 ENF CONF               03-18-70 REF ATTY FOR APP ACT   07-16-70 SCD SUBMITTED          08-31-70 SCD SUBMITTED

        10-31-70 SCD SUBMITTED          11-24-70 STIP AGREED TO         11-13-71 ENF CONF               01-14-72 SCD SUBMITTED

        06-11-72 ENF CONF               07-21-72 ENF CONF                - -                            - -

21-909-5-01-02-014      PENN CENTRAL RR EST      PENN CENTRAL R R        OIL SLUDGE LAGOONS    2  1  0  0  1  04
  VIOLATION:            PRIORITY: *** 3 ***                                                     NO ACTIVITY 6 MONTHS
    DATE NOTICE: 07-16-67    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: TRTMT PL    INSP/REPT:   06-30-67
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        07-10-67 VN NOTICE GIVEN         - -                             - -                            - -

21-909-5-01-02-014      PENN CENTRAL RR EST      PENN CENTRAL R R        OIL SLUDGE LAGOONS    2  1  0  0  1  04
  VIOLATION:            PRIORITY: *** 3 ***                                                     NO ACTIVITY 6 MONTHS
    DATE NOTICE: 10-23-70    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: STOR UNT    INSP/REPT:   09-30-70
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT    VN-CATEGORY: PERMIT      ACTION BY:   REG OFFICE
    STATUS:
        10-23-70 VN NOTICE GIVEN        11-25-70 COMPL LTR SUBMITTED    01-12-71 ENF CONF               02-10-71 COMPL LTR SUBMITTED

        04-14-71 VN NOTICE GIVEN        08-02-71 COMPL LTR SUBMITTED    07-20-72 ENF CONF               - -

21-909-5-02-02-010      E PENNS T LNDFL EST      E PENNS TWP LNDFL       LANDFILL              0  0  0  0  0  04
  VIOLATION:            PRIORITY: ***  ***                                                      NO ACTIVITY 6 MONTHS
    DATE NOTICE: 05-03-71    TYPE ORD/VN: DVN LAW     BASIS STATUS:RETN LETTR  VIOL FACLTY: PR/SV UN    INSP/REPT:   04-01-71
    PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG  VN-CATEGORY: OPERATION   ACTION BY:   REG OFFICE
    STATUS:
        05-03-71 VN NOTICE GIVEN        05-24-71 COMPL LTR SUBMITTED     - -                            - -
```

In addition, there is a message portion of the report. Because no enforcement action is involved, a typical message might be "not inspected in 12 months". Figure 19 shows a typical report printout. The value of this report is highly dependent upon quick response and turn-around times. Because the workload on higher priority items currently does not permit the rapid response required, the Bureau has temporarily discontinued issuing this report.

5. Enforcement Activity Report, Enforcement Status Totals, Enforcements in DSE Over One Year -- These three enforcement-related reports are less used than those previously discussed.

The Enforcement Activity Report cites orders and violations during the report period (monthly) which have been added, referred to the Deputy Secretary for Enforcement (DSE), returned to the Bureau of Water Quality Management, and achieved compliance. Additionally, the report indicates workflow during the report period and action categories for orders and violations. Figure 20 shows example output.

Violations and orders are collated according to regional office and are listed by priority according to satisfactory progress, unsatisfactory progress, and repeat violations.

Enforcement Status Totals (shown in Figure 21) give information on violations and orders outstanding as of the report data with: totals by regions, those being processed by office, enforcement action percentages by program, summary percentages by program, age of actions in the hands of the Deputy Secretary for Environment, and a history of workflow by report period.

The report on Enforcements in DSE (Deputy Secretary for Enforcement) Over One Year is a record of orders or violations referred to the office of the Deputy Secretary for Enforcement over one year in age. This record is reported in terms of facility identification code, type of plant, and compliance status. Example output is shown in Figure 22.

6. Input Validation Error Listing and STORET Error Listing -- Both of these output reports are used when errors are identified by validation routines in processing. The errors are collated and compiled according to regional office where they are sent for corrective action. In the case of STORET card errors, the report notes the record on file and cites the reason for data rejection. Example output is shown in Figures 23 and 24, respectively.

7. Update Master Activity List and Cross-Reference Update -- Although both of these reports are updates, they are very different. The Update Master Activity List (Figure 25) compiles additions, changes, and deletions for the following categories of information: establishments, cases, facilities, orders, violations, or inspections. On the

Figure 19

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
MANAGEMENT ACTION ASN-ENFORCEMENT

PAGE 822
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MEADVILLE - OTHER SEWAGE
-WARREN COUNTY-

CO-MUN-TY-ES-CS-FAC	NAME	KIND FAC	LAST INSP	FREQ INSP	COMPLIANCES FAC-OP-EQI-FED-PER-OS	MESSAGE
*BROKENSTRAW TWP.						
*BROKENSTRAW TWP.						
62-[illegible]-[illegible]-01-01-100	SEPTIC-FILTR-CHLOR	TRTMT PL	1- 9-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-[illegible]-[illegible]-01-01-101	OUTFALL	DISCH PT	1- 9-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-923-[illegible]-02-01-100	EXTENDED AERATION	TRTMT PL	1-11-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
*CLARENDON BORO						
62-905-[illegible]-01-01-100	EXT AERATN-SETTLING	TRTMT PL	2-14-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-905-[illegible]-01-01-101	OUTFALL	DISCH PT	2-14-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
*COLUMBUS T.P.						
62-917-[illegible]-01-01-100	BIOFILTER	TRTMT PL	11-21-72	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-917-[illegible]-01-01-101	OUT FALL	DISCH PT	11-21-72	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-917-[illegible]-02-01-100	EXTENDED AERATION	TRTMT PL	1- 1-73	26 WKS	1 1 1 1 1 04	INSPECTION DUE OVER 4 WK
62-917-[illegible]-02-01-101	OUTFALL SEWER	DISCH PT	1- 1-73	26 WKS	1 1 1 1 1 04	INSPECTION DUE OVER 4 WK
*[illegible] T.P.						
62-912-[illegible]-01-01-101	OUTFALL SEWER	DISCH PT	0- 0-00	26 WKS	1 0 0 0 1 01	NOT INSPECTED 12 MONTHS
*[illegible]INGTON TWP.						
62-913-[illegible]-01-01-100	EXTENDED AERATION	TRTMT PL	3-23-72	26 WKS	1 1 0 0 1 04	NOT INSPECTED 12 MONTHS
62-913-[illegible]-01-01-101	OUT FALL	DISCH PT	3-23-72	26 WKS	1 1 0 0 1 04	NOT INSPECTED 12 MONTHS
*[illegible] T.P.						
62-915-[illegible]-01-01-100	SEPTIC SAND FILTER	TRTMT PL	1- 9-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-915-[illegible]-01-01-101	OUT FALL	DISCH PT	1- 9-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-915-[illegible]-02-01-100	EXTENDED AERATION	TRTMT PL	1-12-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-915-[illegible]-02-01-101	OUT FALL SEWER	DISCH PT	1-12-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-915-[illegible]-03-01-100	SEPTIC-FILTR-CHLOR	TRTMT PL	2- 7-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-915-[illegible]-03-01-101	OUTFALL	DISCH PT	2- 7-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-915-[illegible]-05-01-100	SEPTIC-FILTRN-CHLOR	TRTMT PL	0- 0-00	26 WKS	1 1 1 1 1 04	NOT INSPECTED 12 MONTHS
62-915-[illegible]-05-01-101	OUTFALL	DISCH PT	0- 0-00	26 WKS	1 1 1 1 1 04	NOT INSPECTED 12 MONTHS
*PITTSFIELD T.P.						
62-920-[illegible]-01-01-100	EXTENDED AERATION	TRTMT PL	1-12-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-920-[illegible]-01-01-101	OUT FALL SEWER	DISCH PT	1-12-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-920-[illegible]-02-01-100	EXTENDED AERATION	TRTMT PL	1-12-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
62-920-[illegible]-02-01-101	OUT FALL SEWER	DISCH PT	1-12-73	26 WKS	1 1 0 0 1 04	INSPECTION DUE OVER 4 WK
*PLEASANT T.P.						
62-921-[illegible]-01-01-100	EXT AERATION-TERTIARY	TRTMT PL	1-11-73	26 WKS	1 1 1 1 1 04	INSPECTION DUE OVER 4 WK
62-921-[illegible]-01-01-101	OUTFALL	DISCH PT	1-11-73	26 WKS	1 1 1 1 1 04	INSPECTION DUE OVER 4 WK
62-921-[illegible]-02-01-101	SUBSURFACE	DISCH PT	2- 8-73	26 WKS	2 2 0 0 3 05	INSPECTION DUE OVER 4 WK
*SUGAR GROVE T.P.						
62-926-[illegible]-01-01-100	SEPTIC TANK SAND FIL	TRTMT PL	0- 0-00	26 WKS	1 1 0 0 1 04	NOT INSPECTED 12 MONTHS

Figure 19 (continued)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
MANAGEMENT ACTION NON-ENFORCEMENT

MEADVILLE -- OTHER SEWAGE
-WARREN COUNTY-

CO-MUN-T-ES-CS-PAC	NAME	KIND PAC	LAST INSP	FREQ INSP	COMPLIANCES: PAC-CP-INT-REV-PER-DS	MESSAGE
*SUGAR GROVE TWP.						
62-926-6-01-01-101	OUTFALL	DISCH PT	0- 0-00	26 WKS	1 1 0 0 1 04	NOT INSPECTED 12 MONTHS
62-926-6-02-01-100	EXT AERATION	TRTMT PL	0- 0-00	26 WKS	1 1 0 0 1 01	NOT INSPECTED 12 MONTHS
62-926-6-02-01-101	OUTFALL SEWER	DISCH PT	0- 0-00	26 WKS	1 1 0 0 1 01	NOT INSPECTED 12 MONTHS

Figure 20

SRPZ10 COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
FACILITY STATUS BUREAU OF WATER QUALITY MANAGEMENT PAGE 3
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74 RUN DATE 03/18/74

VIOLATIONS ADDED DURING REPORT PERIOD

PROGRAM- SEWAGE

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT	REPEAT VIOLATORS ESTS	CASES	PACS
NORR	0	0	1	0	0	0	0	1	0	1	1	1	1
KING	0	0	0	0	0	0	0	0	0	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	2	0	1	1	0	4	0	4	1	0	0
WMPT	1	0	1	3	1	3	0	9	4	5	0	0	0
PITT	1	0	8	0	0	0	0	9	1	8	2	1	0
MEAD	0	0	1	0	0	1	0	2	1	1	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	2	0	13	3	2	5	0	25	6	19	4	2	1
PROGRAM- OTHER SEWAGE													
NORR	0	0	2	0	1	0	0	3	2	1	1	1	1
KING	0	0	0	2	0	0	0	2	2	0	1	1	1
READ	0	0	1	0	0	0	0	1	0	1	0	0	0
LEWT	0	0	1	0	1	1	0	3	0	3	2	2	1
WMPT	0	0	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	1	0	1	1	0	3	3	0	2	2	2
MEAD	0	0	2	0	0	0	0	2	0	2	1	1	1
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	7	2	3	2	0	14	7	7	7	7	6
PROGRAM- STNG FAM SEWAGE													
NORR	0	0	0	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	6	0	0	0	6	6	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	6	0	0	0	6	6	0	0	0	0
FINAL TOTAL	3	1	42	20	7	19	0	92	44	48	18	16	8

Figure 20 (continued)

SRPZ10

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74

FACILITY STATUS

RUN DATE 03/18/74

ORDERS ADDED DURING REPORT PERIOD

PROGRAM- SEWAGE

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW	REPEAT VIOLATORS ESTS	CASES	FACS
NORR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	2	0	0	0	2	2	0	0	1	1	1
READ	0	0	0	2	0	0	0	2	0	2	0	2	2	1
LEWT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMPT	20	0	0	0	0	0	0	20	20	0	0	1	1	0
PITT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	1	0	0	0	0	1	0	1	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	20	0	1	4	0	0	0	25	22	3	0	4	4	2
PROGRAM- OTHER SEWAGE														
NORR	0	0	1	0	1	0	0	2	1	1	0	1	1	0
KING	0	0	0	0	0	0	0	0	0	0	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	1	0	1	0	0	2	1	1	0	1	1	0
PROGRAM- SING FAM SEWAGE														
NORR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FINAL TOTAL	21	0	3	4	2	1	0	31	23	7	1	5	5	2

Figure 20 (continued)

SRPZ10

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT

FACILITY STATUS

ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74

RUN DATE 03/18/74

SUMMARY- VIOL ADDED DURING RPT PERIOD - ALL PROGRAMS

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT	REPEAT VIOLATORS ESTS	CASES	FACS
NORR	0	0	5	4	2	2	0	13	6	7	2	2	2
WING	0	0	2	10	1	5	0	18	18	0	4	4	2
READ	0	0	1	0	0	0	0	1	0	1	0	0	0
LEWT	1	0	4	0	2	2	0	9	0	9	5	4	1
WMPT	1	0	7	6	1	5	0	20	9	11	1	1	0
PITT	1	1	14	0	1	1	0	18	7	11	5	4	2
HEAD	0	0	9	0	0	4	0	13	4	9	1	1	1
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0

SUMMARY- ORDRS ADDED DURING RPT PERIOD- ALL PROGRAMS

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW	REPEAT VIOLATORS ESTS	CASES	FACS
NORR	0	0	1	0	1	1	0	3	1	2	0	1	1	0
WING	0	0	0	2	0	0	0	2	2	0	0	1	1	1
READ.	0	0	0	2	0	0	0	2	0	2	0	2	2	1
LEWT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMPT	20	0	0	0	1	0	0	21	20	0	1	1	1	0
PITT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAD	1	0	2	0	0	0	0	3	0	3	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FINAL TOTALS

VIOLATIONS	3	1	42	20	7	19	0	92	44	48		18	16	8
ORDERS	21	0	3	4	2	1	0	31	23	7	1	5	5	2
TOTAL	24	1	45	24	9	20	0	123	67	55	1	23	21	10

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Figure 20 (continued)

SRPZ10 COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
FACILITY STATUS BUREAU OF WATER QUALITY MANAGEMENT PAGE 8
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74 RUN DATE 03/18/74

VIOLATIONS REFERRED TO DSE DURING REPORT PERIOD

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT
NORR	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0
WMPT	0	1	0	0	0	0	0	1	1	0
PITT	0	0	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0

ORDERS REFERRED TO DSE DURING REPORT PERIOD

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW
NORR	0	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0

FINAL TOTALS

VIOLATIONS	0	1	0	0	0	0	0	1	1	0	
ORDERS	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	1	0	0	0	0	0	1	1	0	0

Figure 20 (continued)

SRPZ10 — COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
FACILITY STATUS — BUREAU OF WATER QUALITY MANAGEMENT — PAGE 9
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74 — RUN DATE 03/18/74

VIOLATIONS RETURNED TO BWQM DURING REPORT PERIOD

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT
NORR	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0
LENT	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0

ORDERS RETURNED TO BWQM DURING REPORT PERIOD

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW
NORR	0	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0	0
LENT	0	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0	0
EAD	0	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0

FINAL TOTALS

VIOLATIONS	0	0	0	0	0	0	0	0	0	0	
ORDERS	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

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Figure 20 (continued)

SRPZ10

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74

FACILITY STATUS

RUN DATE 03/18/74

VIOLATIONS COMPLIANCE ACHIEVED DURING REPORT PERIOD

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL
NORR	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	2	0	2
WEAD	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0

ORDERS COMPLIANCE ACHIEVED DURING REPORT PERIOD

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS
NORR	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0
WEAD	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0

FINAL TOTALS

	I	II	III	IV	V	VI	NONE	
VIOLATIONS	0	0	0	0	0	2	0	2
ORDERS	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	2	0	2

Figure 20 (continued)

SRPZ10

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74

FACILITY STATUS

WORKFLOW DURING REPORT PERIOD

PAGE 11
RUN DATE 03/18/74

	PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ACTIONS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW	REPEAT VIOLATORS ESTS	CASES	FACS
VIOLATIONS ADDED	3	1	42	20	7	19	0	92	44	48		18	16	8
ORDERS ADDED	71	0	3	4	2	1	0	31	23	7	1	5	5	2
TOTAL	74	1	45	24	9	20	0	123	67	55	1	23	21	10
VIOL SEFER DSE	0	1	0	0	0	0	0	1	1	0				
ORDR REFER DSE	0	0	0	0	0	0	0	0	0	0	0			
TOTAL	0	1	0	0	0	0	0	1	1	0	0			
VIOL RETN BWQM	0	0	0	0	0	0	0	0	0	0				
ORDR RETN BWQM	0	0	0	0	0	0	0	0	0	0	0			
TOTAL	0	0	0	0	0	0	0	0	0	0	0			
VIOL ACHVED COMP	0	0	0	0	0	2	0	2						
ORDR ACHVED COMP	0	0	0	0	0	0	0	0						
TOTAL	0	0	0	0	0	2	0	2						

Figure 20 (continued)

SRPZ10

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT ACTIVITY REPORT FROM 01/01/74 TO 01/31/74

FACILITY STATUS

RUN DATE 03/18/74

ACTION CATEGORY FOR VIOLATIONS DURING REPORT PERIOD

ADMINISTRATIVE COMPLIANCE

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT
HORR	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	1	0	1	1	0
HEAD	0	0	1	0	0	0	0	1	0	1
LEWT	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	1	0	0	1	0	2	1	1
CRIMINAL ENFORCEMENT										
HORR	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0	0
CIVIL ENFORCEMENT										
HORR	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0
MEAD	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0	0
FINAL TOTAL	0	0	1	0	0	1	0	2	1	1

Figure 21

SRPZ30

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT STATUS TOTALS

FACILITY STATUS

RUN DATE 03/18/74

VIOLATIONS OUTSTANDING AS OF 01/31/74

PROGRAM- SEWAGE

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT
NORR	17	13	21	17	5	8	12	93	46	47
KING	17	0	1	3	4	1	18	44	27	17
HEAD	0	0	21	0	2	0	8	31	3	28
LEWT	0	0	25	4	13	7	11	60	13	47
WMPT	1	1	11	10	13	13	0	49	15	34
PITT	3	0	33	7	2	4	3	52	18	34
HEAD	0	2	11	2	0	5	10	30	19	11
HARR	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	38	16	123	43	39	38	62	359	141	218
PROGRAM- OTHER SEWAGE										
NORR	6	3	44	23	7	21	7	111	46	65
KING	43	1	2	4	10	7	31	98	67	31
READ	0	0	32	1	3	0	3	37	8	29
LEWT	1	0	22	12	25	30	9	97	9	88
WMPT	0	0	17	12	10	17	7	63	10	53
PITT	4	3	31	10	11	14	7	80	40	40
HEAD	0	4	23	11	1	17	10	66	46	20
HARR	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	54	11	167	73	67	106	74	552	226	326
PROGRAM- SING FAM SEWAGE										
NORR	0	0	0	3	0	1	0	4	1	3
KING	13	0	0	6	0	0	0	19	19	0
HEAD	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	9	12	0	0	4	25	0	25
PITT	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	13	0	9	21	0	1	4	48	20	28
FINAL TOTAL	379	81	759	395	202	364	417	2,597	987	1,610

Figure 21 (continued)

SRPZ30

FACILITY STATUS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT STATUS TOTALS

RUN DATE 03/18/74

ORDERS OUTSTANDING AS OF 01/31/74

PROGRAM- SEWAGE

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW
NORR	64	15	42	81	7	67	26	302	163	115	24
KING	39	0	3	2	0	3	23	70	41	29	0
READ	0	0	19	5	0	1	51	76	38	37	1
LEWT	3	1	47	3	2	0	42	98	53	23	22
WMPT	20	2	1	27	0	2	54	106	63	30	13
PITT	1	0	91	3	11	16	147	269	174	31	64
HEAD	20	0	16	2	1	1	27	67	46	20	1
HARR	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	147	18	219	123	21	90	370	988	578	285	125

PROGRAM- OTHER SEWAGE

NORR	1	0	3	12	8	75	48	147	71	53	23
KING	7	0	0	0	4	0	7	18	15	2	1
READ	0	0	10	0	0	4	4	18	11	6	1
LEWT	0	0	0	1	2	0	13	16	10	4	2
WMPT	0	0	0	2	0	0	3	5	2	2	1
PITT	0	0	7	0	1	12	59	79	30	8	41
HEAD	1	0	2	0	0	0	4	7	2	4	1
HARR	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	9	0	22	15	15	91	138	290	141	79	70

PROGRAM- STNG FAM SEWAGE

NORR	0	0	0	0	0	0	0	0	0	0	0
KING	0	0	0	0	0	0	0	0	0	0	0
READ	0	0	0	0	0	0	0	0	0	0	0
LEWT	0	0	0	0	0	0	0	0	0	0	0
WMPT	0	0	0	0	0	0	0	0	0	0	0
PITT	0	0	0	0	0	0	0	0	0	0	0
HEAD	0	0	0	0	0	0	0	0	0	0	0
HARR	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0	0	0

FINAL TOTAL	218	36	324	233	70	271	846	1,998	970	568	460

Figure 21 (continued)

SRPZ30

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT STATUS TOTALS

FACILITY STATUS

RUN DATE 03/18/74

VIOLATION TOTALS BY REGION AS OF 01/31/74

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT
WORR	42	46	146	162	40	124	125	685	333	352
KING	135	3	10	30	27	25	90	320	209	111
READ	0	1	136	2	11	0	39	189	37	152
LEWT	3	1	102	42	59	74	45	326	45	281
HMPT	9	11	96	99	45	70	29	359	66	293
PITT	185	11	197	38	18	34	24	508	160	348
MEAD	4	8	72	22	2	37	65	210	137	73
MARK	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	379	81	759	395	202	364	417	2,597	987	1,610

ORDER TOTALS BY REGION AS OF 01/31/74

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW
WORR	76	31	44	156	22	199	145	683	312	242	129
KING	59	0	1	2	19	8	36	128	93	33	2
READ	0	0	39	12	0	6	143	200	57	49	94
LEWT	3	1	50	4	6	0	65	129	86	32	31
HMPT	21	2	4	51	0	2	95	175	95	47	33
PITT	32	2	153	4	21	55	298	565	273	133	159
MEAD	27	0	20	4	2	1	64	118	74	32	12
MARK	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	218	36	324	233	70	271	846	1,998	970	568	460
FINAL TOTAL	597	117	1,083	628	272	635	1,263	4,595	1,957	2,178	460

Figure 21 (continued)

SRPZ30

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
ENFORCEMENT STATUS TOTALS

FACILITY STATUS

RUN DATE 03/18/74

VIOLATIONS BEING PROCESSED, BY OFFICE AS OF 01/31/74

REG OFF	VIOLATIONS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL VIOL	TOTAL SAT	TOTAL UNSAT
NORR	75	32	121	142	37	119	123	599	310	289
KING	177	3	12	30	27	23	86	308	201	107
READ	0	1	132	2	11	0	35	181	32	149
LEWT	3	1	89	41	58	74	45	311	40	271
WMPT	9	11	96	99	45	70	29	359	66	293
PITT	133	9	163	35	14	33	23	416	126	290
HEAD	2	7	83	21	2	30	32	183	119	64
HARR	0	0	[illegible]	0	0	0	0	0	0	0
SUB TOTAL	299	64	[illegible]	370	194	357	393	2,357	894	1,463
ATTY HBG C	5	0	13	1	1	0	3	23	12	11
ATTY PITT	55	3	35	4	4	2	14	118	52	66
ATTY PHIL	20	14	25	20	3	5	7	94	26	68
ATTY HBG R	0	0	5	0	0	0	0	5	3	2
ATTY KING	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	80	17	79	25	8	7	24	240	93	147
SUB TOTAL	379	81	749	395	202	364	417	2,597	987	1,610

ORDERS BEING PROCESSED, BY OFFICE AS OF 01/31/74

REG OFF	ORDERS BY PRIORITY I	II	III	IV	V	VI	NONE	TOTAL ORDERS	TOTAL SAT	TOTAL UNSAT	TOTAL REVIEW
NORR	72	19	58	149	19	196	145	653	303	221	129
KING	55	0	4	2	19	8	34	122	90	30	2
READ	0	0	39	12	0	6	143	200	57	49	94
LEWT	1	1	58	3	6	0	64	123	66	27	30
WMPT	20	2	[illegible]	43	0	2	70	147	80	44	23
PITT	25	2	176	2	20	51	205	431	212	98	121
HEAD	23	0	17	4	2	1	58	105	62	31	12
HARR	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	196	24	291	215	66	264	725	1,781	870	500	411
ATTY HBG C	3	0	23	10	1	1	64	102	47	14	41
ATTY PITT	2	0	9	1	0	3	56	81	42	31	8
ATTY PHIL	7	12	1	7	3	3	1	34	11	23	0
ATTY HBG R	0	0	0	0	0	0	0	0	0	0	0
ATTY KING	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	22	12	33	18	4	7	121	217	100	68	49
SUB TOTAL	218	36	324	233	70	271	846	1,998	970	568	460
FINAL TOTAL	597	117	1,083	628	272	635	1,263	4,595	1,957	2,178	460

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Figure 21 (continued)

SRPZ30 COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
FACILITY STATUS BUREAU OF WATER QUALITY MANAGEMENT PAGE 9
ENFORCEMENT STATUS TOTALS RUN DATE 03/18/74

ENFORCEMENT ACTION PERCENTAGES BY PROGRAM AS OF 01/31/74

PROGRAM- WATER SUPPLY

ESTABLISHMENTS	WORR	KING	READ	LEWT	WMPT	PITT	MEAD	HARR	FINAL TOTAL
NUMBER									
IN COMP	93	143	220	168	179	183	189	0	1,175
IN VIOL	67	112	206	96	110	162	167	0	920
SAT	26	31	14	72	69	21	22	0	255
UNSAT	11	19	4	2	14	10	19	0	79
REVIEW	15	12	10	70	55	11	3	0	176
	0	0	0	0	0	0	0	0	0
PERCENT									
IN COMP	72.0	78.3	93.6	57.1	61.5	88.5	88.4	0.0	78.3
IN VIOL	28.0	21.7	6.4	42.9	38.5	11.5	11.6	0.0	21.7
SAT	11.0	13.3	1.8	1.2	7.8	5.5	10.1	0.0	6.7
UNSAT	15.1	8.4	4.5	41.7	30.7	6.0	1.6	0.0	15.0
REVIEW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CASES									
NUMBER									
IN COMP	109	143	223	168	179	194	192	0	1,208
IN VIOL	83	112	209	96	110	171	170	0	951
SAT	26	31	14	72	69	23	22	0	257
UNSAT	11	19	4	2	14	11	19	0	80
REVIEW	15	12	10	70	55	12	3	0	177
	0	0	0	0	0	0	0	0	0
PERCENT									
IN COMP	76.1	78.3	93.7	57.1	61.5	88.1	89.5	0.0	78.7
IN VIOL	23.9	21.7	6.3	42.9	38.5	11.9	11.5	0.0	21.3
SAT	10.1	13.3	1.8	1.2	7.8	5.7	9.9	0.0	6.5
UNSAT	13.8	8.4	4.5	41.7	30.7	6.2	1.6	0.0	14.7
REVIEW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FACILITIES									
NUMBER									
IN COMP	1,208	1,328	2,115	1,682	1,528	1,444	1,294	0	10,599
IN VIOL	1,184	1,291	2,101	1,593	1,445	1,421	1,269	0	10,284
SAT	24	37	14	89	83	23	25	0	315
UNSAT	24	22	4	4	16	11	22	0	103
REVIEW	0	15	10	85	67	12	3	0	212
	0	0	0	0	0	0	0	0	0
PERCENT									
IN COMP	96.4	97.2	99.3	94.7	94.6	98.4	98.1	0.0	97.0
IN VIOL	3.6	2.8	0.7	5.3	5.4	1.6	1.9	0.0	3.0
SAT	2.0	1.7	0.2	0.2	1.0	0.8	1.7	0.0	1.0
UNSAT	1.7	1.1	0.5	5.1	4.4	0.8	0.2	0.0	2.0
REVIEW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 22

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SRPZ30                          C O M M O N W E A L T H   O F   P E N N S Y L V A N I A
                              D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S
FACILITY STATUS                  B U R E A U   O F   W A T E R   Q U A L I T Y   M A N A G E M E N T                    PAGE   2
                                          ENFORCEMENTS IN DSE OVER 1 YEAR                                          RUN DATE 03/18/74

02-127-5-04-01-012     NATRONA BOTTLING CO      NATRONA PLANT            OUTFALL #1 1" PIPE        3  0  3  0  3  03
   VIOLATION:          PRIORITY: *** 3 ***
     DATE NOTICE: 12/04/72    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: DISCH PT    INSP/REPT:   08/01/72
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: RECT ACHVD  VN-CATEGORY: PERMIT      ACTION BY:   ATTY PITT
     STATUS:
        09/27/72REF ATTY FOR APP ACT  12/04/72ORDER/VIOL LTR/INSP   03/05/73COMPL/RECT ACHIEVED   03/16/73STIP AGREED TO
        03/19/73RETURNED TO BUREAU

02-127-5-04-01-013     NATRONA BOTTLING CO      NATRONA PLANT            OUTFALL #3 3" PIPE        3  0  3  0  3  03
   VIOLATION:          PRIORITY: *** 3 ***
     DATE NOTICE: 12/04/72    TYPE ORD/VN: DVN LAW     BASIS STATUS:INSPECTION  VIOL FACLTY: DISCH PT    INSP/REPT:   08/01/72
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: RECT ACHVD  VN-CATEGORY: PERMIT      ACTION BY:   ATTY PITT
     STATUS:
        09/27/72REF ATTY FOR APP ACT  12/04/72ORDER/VIOL LTR/INSP   03/05/73COMPL/RECT ACHIEVED   03/16/73STIP AGREED TO
        03/19/73RETURNED TO BUREAU

02-133-5-02-01-011     PGH COAL CO      EST     RENTON MINE WASHERY      THICKENER                 3  1  3  0  3  04
   VIOLATION:          PRIORITY: *** 3 ***
     DATE NOTICE: 10/16/72    TYPE ORD/VN: DVN LAW     BASIS STATUS:SCD SUBMTD  VIOL FACLTY: TRTMT PL    INSP/REPT:   08/18/72
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG  VN-CATEGORY: OPERATION   ACTION BY:   ATTY PITT
     STATUS:
        10/16/72ORDER/VIOL LTR/INSP   12/05/72REF ATTY FOR APP ACT  07/17/73STIP AGREED TO        07/19/73RETURNED TO BUREAU

02-133-5-02-01-012     PGH COAL CO      EST     RENTON MINE WASHERY      RETAINING POND            3  1  3  1  3  04
   VIOLATION:          PRIORITY: *** 3 ***
     DATE NOTICE: 10/16/72    TYPE ORD/VN: DVN LAW     BASIS STATUS:SCD SUBMTD  VIOL FACLTY: TRTMT PL    INSP/REPT:   08/18/72
     PERMIT NO:   0000000     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG  VN-CATEGORY: OPERATION   ACTION BY:   ATTY PITT
     STATUS:
        10/16/72ORDER/VIOL LTR/INSP   12/05/72REF ATTY FOR APP ACT  07/17/73STIP AGREED TO        07/19/73RETURNED TO BUREAU

02-133-7-01-02-100     PLUM BOROUGH             REGENCY PARK STP         TRICKLING FILTER          3  1  3  3  1  04
   OTHER AGNCY ORDER:  PRIORITY: ***  ***
     DATE NOTICE: 06/21/71    TYPE ORD/VN: B EFFLUENT  BASIS STATUS:NO SCD/RES  ISS. AGENCY: SWB
     PERMIT NO:   0009296     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT                             ACTION BY:   ATTY PITT
     STATUS:
        12/07/71REF ATTY FOR APP ACT

02-133-7-01-03-100     PLUM BOROUGH             HOLIDAY PARK STP         EXTENDED AERATION         3  3  3  0  1  05
   OTHER AGNCY ORDER:  PRIORITY: *** 1 ***
     DATE NOTICE: 06/21/71    TYPE ORD/VN: B EFFLUENT  BASIS STATUS:SCD SUBMTD  ISS. AGENCY: SWB
     PERMIT NO:   0046655     SEQUENCE #:  01          VN/CPL STAT: VN SAT PRG                           ACTION BY:   ATTY PITT
     STATUS:
        12/07/71REF ATTY FOR APP ACT  02/26/73SCD SUBMITTED   .    11/26/73RETURNED TO BUREAU

02-133-7-01-04-100     PLUM BOROUGH             GARLOW HEIGHTS STP       TRICKLING FILTER          3  1  3  3  1  04
   OTHER AGNCY ORDER:  PRIORITY: ***  ***
     DATE NOTICE: 06/21/71    TYPE ORD/VN: B EFFLUENT  BASIS STATUS:NO SCD/RES  ISS. AGENCY: SWB
     PERMIT NO:   0089295     SEQUENCE #:  01          VN/CPL STAT: VN UNSAT                             ACTION BY:   ATTY PITT
     STATUS:
        12/07/71REF ATTY FOR APP ACT
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Figure 23

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PAVW30                    COMMONWEALTH OF PENNSYLVANIA
                       DEPARTMENT OF ENVIRONMENTAL RESOURCES
                          FACILITY STATUS INPUT VALIDATION ERROR LISTING                    09/10/73    PAGE 004

      ERROR MESSAGE        00000000011111111112222222222333333333344444444445555555555666666666677777777778
                           12345678901234567890123456789012345678901234567890123456789012345678901234567890

IMPROPER FIELD CONTENT     *CA2094830201 111.000000000000 2
                                                   ***
ADDN  SEQ INCOMPLETE       CAP2094830201001FILTER CHECK RECIRC 0602 342C94805007300                  0C33  302
ADDN  SEQ INCOMPLETE       CAV2 9483020100107247 3V00000007127305010131131 9C072473          6
ADDN  SEQ INCOMPLETE       CAC2094830201000APPLE VALLEY RACQUET0605007300000000000000000000000000
ADDN  SEQ INCOMPLETE       CAA2094830201000APPLE VALLEY RACQUET06
```

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Figure 23 (continued)

```
FAVW35                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A
                      D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S
                          FACILITY STATUS INPUT VALIDATION ERROR LISTING                    09/10/73    PAGE 005

     ERROR MESSAGE          00000000011111111112222222222333333333344444444445555555555666666666677777777778
                            12345678901234567890123456789012345678901234567890123456789012345678901234567890

                  INPUT                          ERRORS                          OUTPUT

          ADDITIONS: EST          9       ADDITIONS: EST          1       ADDITIONS: EST          8
                     CASE        10                  CASE         1                  CASE         9
                     FAC F       43                  FAC F        4                  FAC F       39
                         G       43                      G        4                      G       39
                     ORDER        3                  ORDER        0                  ORDER        3
                     VIOL        47                  VIOL         1                  VIOL        46
                     INSPEC     237                  INSPEC       0                  INSPEC     237
                   SUB TOTAL    392                SUB TOTAL     11                SUB TOTAL    381
          CHANGES:   EST          1       CHANGES:   EST          0       CHANGES:   EST          1
                     CASE         3                  CASE         1                  CASE         2
                     FAC F       24                  FAC F        0                  FAC F       24
                         G        9                      G        0                      G        9
                     ORDER        9                  ORDER        0                  ORDER        9
                     VIOL        23                  VIOL         0                  VIOL        23
                     INSPEC       8                  INSPEC       0                  INSPEC       8
                   SUB TOTAL     77                SUB TOTAL      1                SUB TOTAL     76
          DELETIONS               15       DELETIONS               0       DELETIONS               15
          FAC STD                  0       FAC STD                 0       FAC STD                  0
          CR ADDS PROCESSED        0       CR ADDS PROCESSED       0       CR ADDS PROCESSED        0
          INDETERMINATE            0       INDETERMINATE           0
              TOTAL INPUT        484           TOTAL ERRORS       12           TOTAL OUTPUT       472

     OBRT  00:00:26
```

Figure 24

```
CFVH65                    COMMONWEALTH OF PENNSYLVANIA
                    DEPARTMENT OF ENVIRONMENTAL RESOURCES                    RUN DATE 08/10/79
                              STORET ERROR LISTING                                PAGE   5
0000000001111111 111222222222233 33 3
12345678901234567890123456789012345678901 23 4          RECORD ON FILE          REASON REJECTED
RDP6290720101201                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
                                                                                CC24    MUST BE *0*
                                                                                CC25-30 MUST BE NUMERIC
                                                                                CC31    MUST BE NUMERIC
                                                                                CC32-33 MUST BE *00*
                                                                                CC34    MUST BE A 1 OR 3
RDP6290720101202                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
                                                                                CC24    MUST BE *0*
                                                                                CC25-30 MUST BE NUMERIC
                                                                                CC31    MUST BE NUMERIC
                                                                                CC32-33 MUST BE *00*
                                                                                CC34    MUST BE A 1 OR 3
RDP6290720101203                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
                                                                                CC24    MUST BE *0*
                                                                                CC25-30 MUST BE NUMERIC
                                                                                CC31    MUST BE NUMERIC
                                                                                CC32-33 MUST BE *00*
                                                                                CC34    MUST BE A 1 OR 3
RDP6290720101204                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
                                                                                CC24    MUST BE *0*
                                                                                CC25-30 MUST BE NUMERIC
                                                                                CC31    MUST BE NUMERIC
                                                                                CC32-33 MUST BE *00*
                                                                                CC34    MUST BE A 1 OR 3
RDP6290720101401                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
                                                                                CC24    MUST BE *0*
                                                                                CC25-30 MUST BE NUMERIC
                                                                                CC31    MUST BE NUMERIC
                                                                                CC32-33 MUST BE *00*
                                                                                CC34    MUST BE A 1 OR 3
RDP6290720101601                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
                                                                                CC24    MUST BE *0*
                                                                                CC25-30 MUST BE NUMERIC
                                                                                CC31    MUST BE NUMERIC
                                                                                CC32-33 MUST BE *00*
                                                                                CC34    MUST BE A 1 OR 3
RDP6290720101701                                                                CC17-22 MUST BE NUMERIC
                                                                                CC23    MUST BE NUMERIC
```

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CC29-30 MUST BE NUMERIC

Figure 24 (continued)

```
CPVW05                    COMMONWEALTH OF PENNSYLVANIA
                    DEPARTMENT OF ENVIRONMENTAL RESOURCES                    RUN DATE 08/10/78
                                STORET ERROR LISTING                                  PAGE   6
0000000001111111 1112222222222233 33 3
1234567890123456 7890123456789012 3 4                RECORD ON FILE
                                                                        REASON REJECTED
                                                                        CC31     MUST BE NUMERIC
                                                                        CC32-33  MUST BE *00*
                                                                        CC34     MUST BE # 1 OR 3
RDP6290720101702
                                                                        CC17-22  MUST BE NUMERIC
                                                                        CC23     MUST BE NUMERIC
                                                                        CC24     MUST BE *0*
                                                                        CC25-30  MUST BE NUMERIC
                                                                        CC31     MUST BE NUMERIC
                                                                        CC32-33  MUST BE *00*
                                                                        CC34     MUST BE # 1 OR 3
```

Figure 24 (continued)

EPV285

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL RESOURCES

RUN DATE 08/10/79

STORET ERROR LISTING CONTROL TOTALS

PAGE 7

INPUT		ERRORS		OUTPUT	
ADDITIONS: RAP		ADDITIONS: RAP		ADDITIONS: RAP	
RAQ		RAQ		RAQ	
RAR		RAR		RAR	
OTH		OTH			
SUB TOTAL		SUB TOTAL		SUB TOTAL	
DELETIONS: RDP	15	DELETIONS: RDP	15	DELETIONS: RDP	
TOTAL INPUT	15	TOTAL ERRORS	15	TOTAL OUTPUT	
				OUTPUT ADD SETS	

Figure 25

```
PAUW46                    COMMONWEALTH OF PENNSYLVANIA
                     DEPARTMENT OF ENVIRONMENTAL RESOURCES
                   FACILITY STATUS UPDATE MASTER ACTIVITY LIST                    09/10/73     PAGE 034

          MESSAGE          00000000011111111112222222222333333333344444444445555555555666666666677777777778
                           12345678901234567890123456789012345678901234567890123456789012345678901234567890

ADDITION OF AN INSPECTION  *CAX65001810111 73.514.2M            0                          3031104
ADDITION OF AN INSPECTION   CAX65 1810111 7 .229.4M             0                          3033109
ADDITION OF AN INSPECTION   CAX65001810110 7 0219.4M            0                          3033109
CHANGE OF A VIOLATION       CCX65001810111 7 63 04V5569+1770022603020110621020 51473       1
ADDITION OF AN INSPECTION  *CAX65005501010173.424.2M            0                          1111404
ADDITION OF AN INSPECTION   CAX65005501010173.710.2M            0
ADDITION OF AN INSPECTION   CAX65005501010173.424.2M            0                          3331104
ADDITION OF AN INSPECTION   CAX65005501010173.710.2M            0
ADDITION OF AN INSPECTION   CAX65005501010173.111.2M            0                          0115101
ADDITION OF AN INSPECTION   CAX65005501010173.424.2M            0                          1111104
ADDITION OF AN INSPECTION   CAX65005501010173.710.2M            0
ADDITION OF AN INSPECTION   CAX65005501010173.424.2M            0                          0031204
ADDITION OF AN INSPECTION   CAX65005501010173.710.2M            0
ADDITION OF A FACILITY     *CAX65 75 6010 7 TRALL 24        060004205007        2            26303 303
                            CAX65 75 6010 7 ALLEGHENY RIVER0000114920
ADDITION OF A VIOLATION    *CAX65 1650101010730402V4641010720523033101306110202287 3
ADDITION OF AN INSPECTION   CAX65 1650101010720525.2M3          0                          0330103
ADDITION OF AN INSPECTION   CAX65 1650101010 73.228.2M          0                          0330103
CHANGE OF A FACILITY        CAX65 3101010101 .65. EATION PLANT 06                                 303 103
ADDITION OF AN INSPECTION  *CAX65 2 5 7011 7 .711.2M            0
ADDITION OF A VIOLATION    *CAX65 5130901010721214000000007212140101012081453020573 3
ADDITION OF AN INSPECTION   CAX65 3130901010721214.2M           0                          0033309
ADDITION OF A VIOLATION    *CAX65 9230101101073020 V4625027301040401013066102020773 6
ADDITION OF AN INSPECTION   CAX65 2230101101 73.104.2M          0                          0013104
ADDITION OF A VIOLATION     CAX65 2 4010101 73 .007V0024573010404010130661020207 73 6
ADDITION OF AN INSPECTION   CAX65 9230101010 73 .104.2M         0                          1113104
ALREADY IN FILE             CAX65 9230101010 73.104.2M          0                          1113104
ADDITION OF A CASE         *CAC65 9547010200 2NESTVIEW MP STP   01000073000000000000000000000000000
ADDITION OF A FACILITY      CAF65 9547010210 0EXAIR-TRIKFL-SND FLT0108C54059540000 7300          260000001
                            CAF65 9547010210 6 1973732013SL553M124414840707
ADDITION OF A FACILITY      CAF65 9547010210 1C C HEAD-ALL       0108C54059540000 7300          260000001
                            CAG65 9547010210 1070 KELLEY RUN TRIB0010000003
```

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Figure 25 (continued)

PAU940

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
FACILITY STATUS UPDATE MASTER ACTIVITY LIST 08/10/73 PAGE C25

MESSAGE: 0000000001111111111222222222233333333334444444444555555555566666666677777777778
1234567890123456789012345678901234567890123456789012345678901234567890

INPUT			ERRORS			OUTPUT		
ADDITIONS:	EST	8	ADDITIONS:	EST	0	ADDITIONS:	EST	8
	CASE	9		CASE	0		CASE	9
	FAC SET	78		FAC SET	4		FAC SET	37
	ORDER	3		ORDER	0		ORDER	3
	VIOL	46		VIOL	13		VIOL	33
	INSPEC	297		INSPEC	4		INSPEC	293
	SUB TOTAL	361		SUB TOTAL	21		SUB TOTAL	323
CHANGES:	EST	1	CHANGES:	EST	0	CHANGES:	EST	1
	CASE	2		CASE	0		CASE	2
	FAC SET	33		FAC SET	2		FAC SET	31
	ORDER	9		ORDER	0		ORDER	9
	VIOL	23		VIOL	3		VIOL	20
	INSPEC	8		INSPEC	0		INSPEC	8
	SUB TOTAL	76		SUB TOTAL	5		SUB TOTAL	71
DELETIONS:	EST	2	DELETIONS:	EST	0	DELETIONS:	EST	2
	CASE	1		CASE	1		CASE	2
	FAC SET	5		FAC SET	0		FAC SET	15
	ORDER	0		ORDER	0		ORDER	0
	VIOL	7		VIOL	0		VIOL	7
	INSPEC	0		INSPEC	0		INSPEC	0
	SUB TOTAL	15		SUB TOTAL	1		SUB TOTAL	26
						DEL GENERATED		12
TOTAL INPUT		472	TOTAL ERRORS		27	TOTAL OUTPUT		420
FAC STD		0				FAC STD		0
CR ADDS PROCESSED (EFFECTIVE)		0				CR ADDS PROCESSED (EFFECTIVE)		0
CR DEL PROCESSED		0				CR DEL PROCESSED		0
						CR DEL GENERATED		15
TOTAL TRANS INPUT		0				TOTAL TRANS OUTPUT		15

OBJT 00100120

(472 - 39) - (27 - 2) + 12 =
433 - 25 + 12 = 420

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other hand, the Cross-Reference Update (Figure 26) reports additions to the cross-reference file of latitude-longitude coordinate data.

Uses

The Facility Status Module and its Enforcement Sub-System easily are the most extensively used portion of WAMIS. The Facility File Listing and Identification Report are widely referred to by all segments of the Bureau of Water Quality Management. In headquarters these reports and the enforcement reports are used as a quick reference for a record of facility characteristics and status of compliance.

These reports are used even more extensively in the field. Inspectors routinely refer to the Identification Report prior to and during their visits to inspected facilities. It is claimed by the inspectors that the report is highly beneficial in refreshing their memories in follow-up inspections, routine inspections, and in preparing their input reports.

Field Compliance and Administration Chiefs claim that the enforcement reports greatly aid in keeping abreast of burgeoning information. Combined with regional files and hand-written notes on computer output, the reports make tracking and follow-up of orders and violations a much easier job.

Much of the other output, while serving a useful purpose, is confined to special or specific one-time interrogations or broad summaries.

In summary, the Facility Status Module output serves a highly useful purpose and aids in job accomplishment.

WATER QUALITY MODULE

General Description

The Water Quality Module maintains an information file on the chemical, biological, and physical characteristics (as determined by laboratory analyses) of all samples taken from the waters of the Commonwealth, including wastewater. The system accommodates inputs from a variety of sampling agencies. Further development of this module will include comparisons to established water quality standards and permit conditions to permit inspection and enforcement where deviations from standard are discovered.

It should be noted that the Water Quality Module has been completed only recently having undergone a number of major revisions. The Bureau of Water Quality Management has chosen to rely on the retrieval capabilities of the STORET System. The water quality data are being transferred to STORET and the system is scheduled to be operational by May 15, 1974.

Figure 26

CFUR10 C O M M O N W E A L T H   O F   P E N N S Y L V A N I A

D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S 07/13/79

CROSS REFERENCE UPDATE PAGE 5

RAP5891050201010	414614007594420	00	1	CRFILE RECORD ADDED
RAP5891050201011	414612007554410	00	1	CRFILE RECORD ADDED
RAP589105 201012	[illegible]	00	1	CRFILE RECORD ADDED
RAP589123 101011	[illegible]	00	1	CRFILE RECORD ADDED
RAP589203 101011	414331007533050	00	1	CRFILE RECORD ADDED
RAP589203 101012	414331107533050	00	1	CRFILE RECORD ADDED
RAP589203 201011	414326007533060	00	1	CRFILE RECORD ADDED
[illegible]	[illegible]	00	1	CRFILE RECORD ADDED
[illegible]	[illegible]	00	1	CRFILE RECORD ADDED
[illegible]	[illegible]	00	1	CRFILE RECORD ADDED
RAP589324 101001	415312007546270	00	1	CRFILE RECORD ADDED
RAP589331 101201	415715007535230	00	1	CRFILE RECORD ADDED
RAP589331 101202	415716007535240	00	1	CRFILE RECORD ADDED
RAP589331 101203	[illegible]	00	1	CRFILE RECORD ADDED
RAP589331 101204	[illegible]	00	1	CRFILE RECORD ADDED
RAP589331 101301	[illegible]	00	1	CRFILE RECORD ADDED
RAP589331 101302	415714007537130	00	1	CRFILE RECORD ADDED
RAP589331 101303	415700007537400	00	1	CRFILE RECORD ADDED
RAP589331 101501	415716007536290	00	1	CRFILE RECORD ADDED
RAP589331 101601	[illegible]	00	1	CRFILE RECORD ADDED
RAP589331 101701	[illegible]	00	1	CRFILE RECORD ADDED
RAP589331 101702	[illegible]	00	1	CRFILE RECORD ADDED
RAP589331 101703	415705007537120	00	1	CRFILE RECORD ADDED
RAP589381 101201	415159007531020	00	1	CRFILE RECORD ADDED
RAP589381 101202	415140007531140	00	1	CRFILE RECORD ADDED
RAP589381 101301	[illegible]	00	1	CRFILE RECORD ADDED
RAP589381 101302	[illegible]	00	1	CRFILE RECORD ADDED
RAP589381 101303	[illegible]	00	1	CRFILE RECORD ADDED
RAP589381 101402	415136007531020	00	1	CRFILE RECORD ADDED
RAP589381 101501	415157007530971	00	1	CRFILE RECORD ADDED
RAP589381 101502	415148007531100	00	1	CRFILE RECORD ADDED
[illegible]	[illegible]	00	1	CRFILE RECORD ADDED
RAP589381 101701	415158007531021	00	1	CRFILE RECORD ADDED
RAP589381 101702	415150007531090	00	1	CRFILE RECORD ADDED

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Figure 26 (continued)

```
CPURIO                    COMMONWEALTH OF PENNSYLVANIA
                    DEPARTMENT OF ENVIRONMENTAL RESOURCES                    07/13/79
                                CROSS REFERENCE UPDATE                        PAGE  4
     RAP5980210101101 414435107717171 00 1                    CRFILE RECORD ADDED
     RAP5980210101102 414436107717211 00 1                    CRFILE RECORD ADDED
     RAP5980210101104 414515007719240 00 1                    CRFILE RECORD ADDED
     RAP5980210101105 414542007719120 00 1                    CRFILE RECORD ADDED
```

Figure 26 (continued)

EBURID

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL RESOURCES

07/13/79

CROSS REFERENCE UPDATE

	RIVER MILE INDEX	LATITUDE-LONGITUDE	IDENTIFICATION CODE
PREVIOUS TOTAL	2,604	21,010	20,963
ADDED		239	239
DELETED			
CURRENT TOTAL	2,624	21,249	21,192
TOTAL INPUT	234		
STREAM SAMPLES			
TOTAL ERRORS	17		
CYLINDERS-AVIB	160		
CYLINDERS-USED	64		
CYLINDERS-REMI	99		

Input

1. Water or Waste Quality Report -- This report comprises virtually all of the input to the Water Quality Module. All samples taken by various agencies within the state are accompanied by the form. As indicated earlier, each facility inspection usually includes at least one sample. Additionally, stream samples are taken at various locations throughout the state. Since the number of samples, as well as the parameters, measured results in a voluminous file, automated storage and retrieval of this information is essential.

Table 7 indicates the input information which comprises the Water or Waste Quality Report. Figure 27 shows a sample form.

Only selected analyses are run for each sample. Coded instructions permit the inspector to identify sampling location and conditions in sufficient detail so that a standard set of analyses is run for particular samples. For example, in the case of a new water supply, the following parameters would be run:

color
odor
pH
manganese
iron
sulfates
turbidity
alkalinity
ammonia
nitrite
nitrate
chloride
fluoride
hardness
total solids
orthophosphate

The manner in which the report is handled during a facility inspection has been explained previously. All samples collected by Bureau personnel are analyzed by Bureau laboratories. Interpretation of the results of all analyses are made principally by field or regional office staff.

2. Special Analyses Report -- On occasions where non-routine samples are taken or special conditions are observed by an inspector or sample collector, special analyses may be requested by the field. These special analyses results are entered on a special report form (Figure 28) which is attached to the Water or Waste Quality Report.

Table 7. WATER OR WASTE QUALITY REPORT INPUT INFORMATION

A. General Information

Type of sample (e.g., facility, network or random stream)

Date received

Establishment

Case

Facility

Collector identification number

County

Municipality

Program (e.g., water supply, bathing places, industrial waste, sewage)

Collector name

Type of treatment (e.g., for sewage - primary, secondary, tertiary, etc.)

Standard analysis group code

Identification code

Latitude

Longitude

Date and time of sample

Kind of sample (e.g., background, effluent, product, influent, storage, mixing zone)

USGS topographic map number

Sampling agency

(continued)

Table 7 (continued).

Sample number

Stream name

Relative point where sample taken

Source

Stream tributaries

B. Field Analyses

Sample type

Sample source

Reason sampled

Composite sample description

Flow measurements

Analyses (selected parameters)

C. Laboratory Analyses

Name of chemist

Date analyzed

Analyses (selected parameters)

ER-BWQ-13
REV 12-72

W 1

FACILITY SAMPLE
STREAM/RANDOM SAMPLE
NETWORK SAMPLE 2

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT

WATER OR WASTE QUALITY REPORT

ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED

Lab Number

Date Received

Figure 27

ESTABLISHMENT	CASE	FACILITY	COLL NUMBER

COUNTY	MUNICIPALITY	PROGRAM	COLL NAME	TYPE TR	STD ANALYSIS

CARD (3) 1/2	ID CODE (ALL CARDS) 4-16 Cnty Mun T Est Case Fac	LATITUDE 4-10	LONGITUDE 11-18	DATE 19-24 M D Y	TIME 25-28 Hr Min	KIND 29
			0			

USGS-O 30-34	AGENCY 35-37	SAMPLE NUMBER 38-43	STREAM NAME 44-57	RELATIVE POINT 58

IW CLASS

TRIBUTARY TO

FULL DESCRIPTION WHERE SAMPLE TAKEN

FIELD ANALYSES

Type Sample	59-60	
Source of Sample	61-62	
Reason Sampled	63-64	
Composite Sample — Proportional Uniform	65	
Composite Sample — Temporal Spatial	66	
Aliquots	67-68	
Flow — Estimated Measured	69	
Condition — Above 1, Below 3, Normal 2, No Flow 4	80	→ CARD (2)
Stream Flow-CFS	(00061)	
Stream Flow-MGD	(50051)	
Pipe Flow-MGD	(50050)	
Gage Reading Ft.	(00065)	
Temp (C)	(00010)	
pH	(00400)	
D.O.	(00300)	
Hal — Cl (50060), Br (71871), I (71866)		
Spec Cond	(00094)	
Appearance	(46001)	
Odor	(01330)	

ADDITIONAL FIELD ANALYSES

LAB ANALYSES

Chemist

Date Analyzed / /

Color	(00080)	
Turb	(00070)	
pH	(00403)	
Alk	(00410)	
pH_4	(00436)	
pH_8 — Hot / Cold	(00437) / (00435)	
SO_4	(00945)	
T.O.C.	(00680)	
C.O.D.	(00340)	
Spec Cond	(00095)	
P — T / TD	(00665) / (00666)	
F	(00951)	
5 Day BOD	(00310)	
Fe-Tot ug/l	(01045)	
Fe^{++} ug/l	(01047)	
Mn-Tot ug/l	(01055)	
Cr-Tot ug/l	(01034)	
Cu-Tot ug/l	(01042)	
Ni-Tot ug/l	(01067)	
Zn-Tot ug/l	(01092)	

Total Solids	(00500)	
Susp Solids	(00530)	
Set Solids	(00545)	
Total Diss Solids	(00515)	
NO_2-N	(00615)	
NO_3-N	(00620)	
NH_3-N	(00610)	
Kjel-N	(00625)	
Hardness	(00900)	
Cl	(00940)	
MBAS	(38260)	
Phenols ug/l — Dr (46002), Ds (32730)		
Oils	(70350)	
Cyanide	(00720)	
___ (_____)		
___ (_____)		
___ (_____)		

ADDITIONAL LAB ANALYSES

CENTRAL OFFICE

0 - Not applicable - Code '0'

WATER SUPPLY

0 - No Treatment
1 - Disinfection
2 - Iron and/or Maganese removal + disinfection
3 - pH and/or alkalinity control + disinfection
4 - Softening
5 - Filtration
6 - Chelation
7 - Filtration + disinfection
8 - Filtration + disinfection
9 - Iron removal or softening, with disinfection

SEWERAGE & INDUSTRIAL WASTES

0 - No Treatment
2 - Primary
3 - Intermediate
4 - Secondary
5 - Closed System
6 - Stabilization Basins
7 - Tertiary
9 - Other

0 - No Treatment
2 - Neutralization, Oxidation & Sedimentation
3 - Oxidation & Sedimentation
4 - Pretreatment plus Filtration
5 - Ion Exchange
9 - Other

BATHING PLACES

0 - No Treatment
1 - Disinfection
5 - Filtration
7 - Filtration & Disinfection
9 - Other

KIND

1 - Background
2 - Effluent
3 - Product (finished water)
4 - Intake water
5 - Intra-facility storage
6 - Mixing zone below discharge
7 - Intra-facility - production

RELATIVE POINT IN STREAM AS VIEWED UPSTREAM

Depth	Left Shore	Center Stream	Right Shore
Surface	1	2	3
Center	4	5	6
Bottom	7	8	9

TYPE CODE

01 - Whole Water
02 - Standard for Comparison
03 - Liquid Filtrate*
04 - Suspended Material*
05 - Bottom Deposits
06 - Biological Items
07 - Floating Solids
08 - Floating Liquids - Oils
09 - Pesticides
* - From Field Filtered Sample

SOURCE CODE

01 - Stream
02 - Lake
03 - Estuary
04 - Ocean*
05 - Well
06 - Spring
07 - Ground Water Monitoring Point
08 - Impoundment or Reservoir
09 - For Future Use
10 - Mine
11 - Treated Effluent or Water
12 - Direct, Untreated, Discharge
13 - In-plant Process

REASON CODE

01 - Routine Inspection
02 - Application Inspection
03 - Fish Kill
04 - Pollution Complaint or Incident
05 - Plant Survey
06 - Stream Survey
07 - Water Quality Network
08 - Water Fowl Affected
09 - Unusual Condition
10 - Compliance Follow-up

SAMPLE APPEARANCE CODE

COLOR CODE

01 - Clear
02 - Gray
03 - Milky
04 - Brown
05 - Black
06 - Blue
07 - Green
08 - Red
09 - Rust
10 - Straw
11 - Yellow
12 - Cloudy
13 - Clear with Particles
14 - Tan
15 - Muddy

INTENSITY CODE

1 - Slightly
2 - Moderately
3 - Very
4 - Extremely

FIELD ODOR CODE

Relative Intensity
0 - None
1 - Mild
2 - Moderate
3 - Serious
4 - Extreme

Figure 27 continued

	02 Tarrant & Vaiers	03 Interstate Streams	04 Groundwater	11 WS Short	12 WS Long	13 Interstate	14 Bottled Water	31 Fish - Short	32 Fish - Long	41 Beaches - Short	51 Ind Effluents	52 Sewer/Treat	53 Metal	54 Coal Washeries	55 Fish Kills	56 Landfills	61 Acid Drainage	71 Sam - Short	82 DMRC
Color	x	x	x	x	x			x	x	x						x			
Odor	x	x	x	x	x			x	x	x						x			
Turb	x	x	x	x	x			x	x	x	x	x				x		x	
pH	x	x	x	x	x			x	x	x	x		x	x	x	x	x	x	
Alk	x		x	x	x			x	x	x	x		x	x	x	x	x	x	
pHg Hot													x				x		
Fe Total		x	x	x	x				x					x		x	x		
[illegible] *																			
SO_4			x		x												x		
Mn			x		x														
Se E			x													x			
P Total	x	x	x																
Tot Diss																			
F			x	x	x														
BOD	x		x							x						x		x	
Tot Solids	x	x		-	x				x				x					x	
Susp Solids											x								
Set Solids				x							x								
NO_2		x	x	x	x	x				x	x					x		x	
NO_3		x	x		x	x				x	x					x		x	
NH_3		x	x		x	x				x	x					x		x	
Kjel																			
Hardness			x		x	x				x									
Cl			x		x	x					x					x		x	
Phenol Dir * Dis							x												x
MBAS			x																
Cyanide *							x												x
Heavy Metals *		x	x	x	x	x			x							x			x
Fix French Sq		1		1	1	1	1		1							x			1
Tot French Sq	2	3		3	2	3	1	1	2	1	1	3	1	1	1	1	1	1	3
1/2 Gal			1 2			1	1												1

* Required Fixing

Fe ++ - 5 ml Conc HCl, No Air
Phenol- 5 ml 10% $CuSO_4$/French Sq
Cr - NaOH to pH 12
Heavy Metal - 5 ml Conc HNO_3/French Sq
1 04 - 2 half gal., 1 fixed heavy metals

ER BWQ 13.1 Rev 12 72

Figure 28

ATTENTION: This form must be attached to the Form ER BWQ 13 Water and Waste Quality Report.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT
WATER OR WASTE QUALITY REPORT - SPECIAL ANALYSES

DATE RECEIVED _____

Sample Number [ ][ ][ ][ ][ ][ ]

Must be identical to Water and Waste Quality Report

ESTABLISHMENT	CASE	FACILITY	COLL. NUMBER

COUNTY	MUNICIPALITY	PROGRAM	COLL. NAME	TYPE TR	STD ANALYSIS

QUALITATIVE REPORT

QUANTITATIVE RESULTS

ANALYSIS	UNITS	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINES)

ANALYST _____ SIGNATURE

DATE _____

CENTRAL OFFICE

Output

Output from the Water Quality Module basically is input from the Water or Waste Quality Report transferred into the STORET system. Experience has shown that output is as accessible as that emanating from other modules. Figure 29 illustrates the current data flow for the Water Quality Module.

Samples are sent to the Bureau laboratories for analysis. Results of the analyses are then passed to the WAMIS section for processing, i.e., keypunching. All data and information processing is monitored by WAMIS operations. Subsequent to keypunching, the Water Quality Module converts, via appropriate programs, the data to magnetic tape in a format suitable for acceptance by the STORET system. The module also, through validation routines, issues error reports which are processed through WAMIS operations for correction. Back-up user reports are produced by the module, and basically are reports of sample analyses. The back-up reports enable regional personnel to identify instances of violation or non-compliance. Subsequent actions that could be taken by regional offices have been described previously.

Output from the STORET system is available through terminals at each regional office and at Bureau headquarters. All retrieval capabilities of STORET, within the constraints of Bureau input, are available to the users at the various terminals.

Uses

Because of the recent completion of this module, its usefulness has not been fully evaluated. A massive effort has been made to convert existing water quality sample files to a format suitable for input into STORET. It is expected that once a substantial data base is included in this module and its STORET interface, and when field personnel become more familiar with the output uses, the Water Quality Module should enjoy extensive use in much the same manner as the Facility Status Module.

CONTACT MODULE

General Description

The Contact System is organized into two autonomous systems: 1) a list of addresses of individuals, corporations, government agencies, and independent organizations which operate water processing facilities or are involved in water quality management; and 2) descriptive data on operator certification.

The various input and output forms and reports which comprise the Contact Module are listed in Table 8.

Figure 29. WATER QUALITY MODULE DATA FLOW

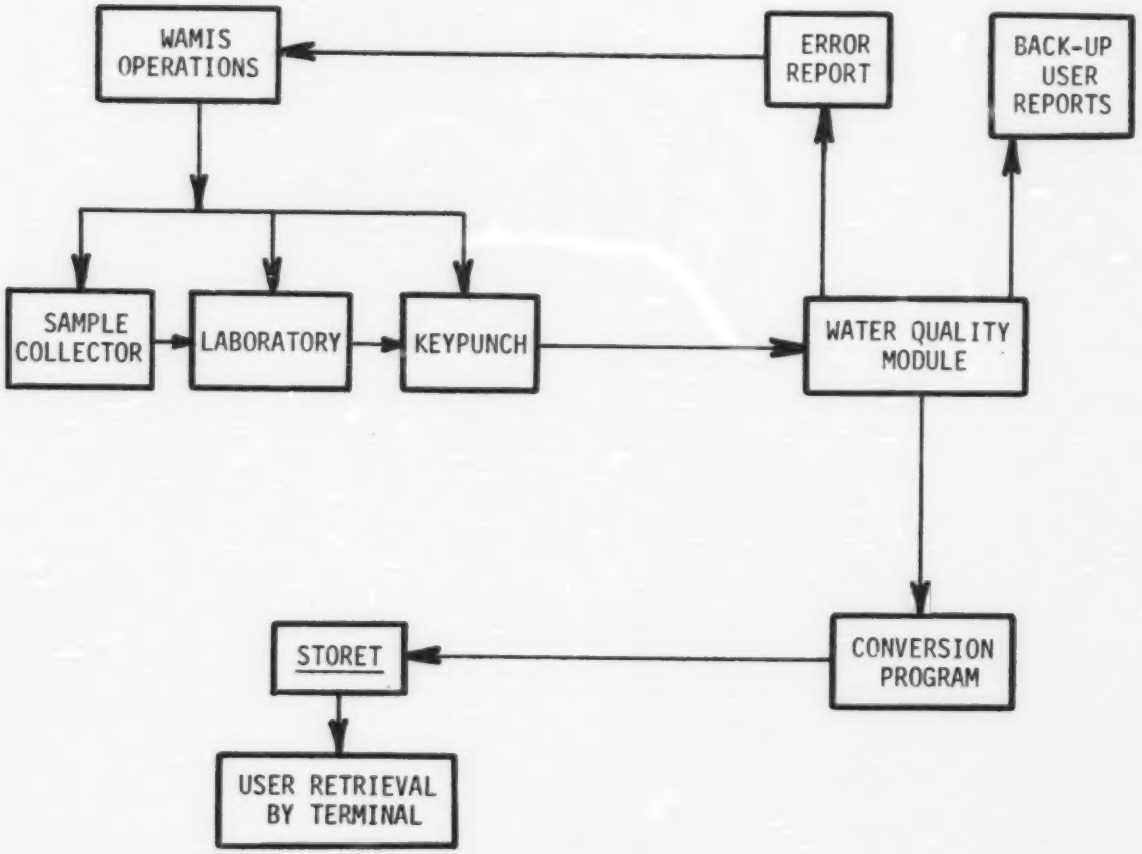

Table 8. CONTACT MODULE INPUT AND OUTPUT FORMS AND REPORTS

<u>Input</u>
Application for Certificate to Operate Sewage Treatment Plants and Waterworks
Contact Subsystem Non-Certification Input
<u>Output</u>
Certified Operator Listing
Name and Address Listing
Activity Listing
Date Expiration Listing
Initial Error Listing

Input

1. Application for Certificate to Operate Sewage Treatment Plants and Waterworks -- Applicants for certification are obliged to fill out a detailed application which is submitted to the Bureau of Water Quality Management headquarters. Information required on these applications is shown in Table 9, with an example application shown in Figure 30. Certification is handled entirely through the headquarters Division of Water Supply and Sewerage. After processing the application, Division staff codes appropriate information for input into WAMIS. Most of the application information is coded with the exception of employment record. The module creates a permanent data file, but performs no decision-making function. Evaluations are made by Division of Water Supply and Sewerage staff.

2. Contact Subsystem Non-Certification Input -- From time to time the Bureau has a need to contact a broad variety of installations, groups, and individuals working in or with an interest in the field of water quality management. Included in these categories may be operators, consulting engineers, sewage treatment plants, waterworks companies, special commissions, boards, and public interest groups and associations. In order to categorize these groupings, the Chief of the WAMIS section has assigned a system identifier number. The system code identifier is for gross listing of various categories, while the system level number identifies divisions thereof.

A single form (Figure 31) is used to input information to the system, and action to include, change, or delete may come from many sources both within and outside of the Bureau. Information included in the input form is as follows:

basic identification
last name and initials
social security number
birthdate
address
telephone numbers (home and business)

Output

1. Certified Operator Listing -- In the course of certifying operators, the Division of Water Supply and Sewerage assigns system code and identification numbers for each operator. Likewise, certificate and operator numbers are assigned. The Certified Operator Listing prints out all the information included in Table 9 according to these assigned numbers, thus providing the Division with a complete and up-to-date list of certified operators. Figure 32 is a sample output of the Certified Operator Listing.

Table 9. CERTIFICATION APPLICATION INFORMATION

Identification

- name
- address
- county
- social security number
- birthdate
- testing location
- telephones (home and business)

Number of years experience

Level of education

For special certificates:

- job title
- plant classification
- plant name and address
- supervisor's name and job title
- current employer

For regular certificates:

- professional engineer's registration number
- examined in civil or sanitary
- previous certification (by type and state)
- certificate classification code
- date of expiration
- certificate number

Employment record

STATE BOARD FOR CERTIFICATION OF SEWAGE TREATMENT PLANT & WATERWORKS OPERATORS

APPLICATION FOR CERTIFICATE TO OPERATE SEWAGE TREATMENT PLANTS & WATERWORKS

(READ ATTACHED INSTRUCTIONS CAREFULLY BEFORE COMPLETING APPLICATION)

☐ REGULAR CERTIFICATE ☐ SPECIAL CERTIFICATE ☐☐☐ TYPE OF PLANT FOR WHICH CERTIFICATION IS REQUESTED

Figure 30

SECTION 1 – TO BE COMPLETED BY ALL APPLICANTS

LAST NAME ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ FIRST & MIDDLE INITIALS ☐☐

ADDRESS ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
NUMBER & STREET

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
CITY

☐☐☐☐☐☐☐☐☐☐☐☐☐☐ STATE ☐☐☐☐☐ ZIP CODE

COUNTY _____

SOCIAL SECURITY NO ☐☐☐-☐☐-☐☐☐☐ BIRTH DATE ☐☐-☐☐-☐☐

DESIRED TESTING LOCATION ☐☐

TELEPHONE (Include Area Code) HOME _____ BUSINESS _____

NUMBER OF YEARS EXPERIENCE AT

SEWAGE TREATMENT PLANT ☐☐

WATER TREATMENT PLANT ☐☐

WATER DISTRIBUTION SYSTEM ☐☐

EDUCATION

HIGHEST GRADE COMPLETED/DEGREE ☐☐

TRAINING

CORRESPONDENCE COURSE(S) ☐☐ SHORT COURSE(S) ☐☐

☐☐ ☐☐

☐☐ ☐☐

SECTION 2 – DEPARTMENT USE ONLY

CARD 1

TYPE LIST ☐

OPERATOR NUMBER ☐☐☐☐☐

CARD NUMBER ☐

CARD 2

COUNTY CODE ☐☐

DATE CERTIFIED ☐☐☐☐

CERTIFICATE STATUS ☐

LOCATION CODE ☐☐☐☐☐

PROGRAM CODE ☐

ESTABLISHMENT NO. ☐☐

CASE NO. ☐☐

FACILITY NO. ☐☐☐

CERTIFICATE TYPE ☐

KIND OF CERTIFICATE ☐

CERTIFICATE CLASS ☐

TYPE BY NO. ☐ CARD TYPE ☐

I, _____, BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT I AM THE APPLICANT AND THAT THE STATEMENTS SUBMITTED IN THIS APPLICATION ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF _____ SS

_____
SIGNATURE OF APPLICANT

SWORN TO AND SUBSCRIBED BEFORE ME
THIS ____ DAY OF _____ 19____

_____
NOTARY PUBLIC

THIS COMMISSION EXPIRES _____

SEAL

I HAD THE DIRECT RESPONSIBILITY, AS DEFINED IN THE RULES AND REGULATIONS, FOR THE OPERATION OF THE PLANT/SYSTEM INDICATED BELOW ON NOVEMBER 18, 1968.

NOTE: EMPLOYER AND/OR SUPERVISOR MAY BE CONTACTED FOR VERIFICATION OF INFORMATION SUBMITTED BY YOU.

INDICATE BELOW ONLY DATA APPLICABLE TO YOUR EMPLOYMENT ON NOVEMBER 18, 1968

YOUR JOB TITLE		NAME & ADDRESS OF PLANT/DISTRIBUTION SYSTEM (Include County)
PLANT CLASSIFICATION	SUPERVISOR'S NAME & JOB TITLE	
CURRENT JOB TITLE		NAME & ADDRESS OF CURRENT EMPLOYER

Figure 30 (continued)

SECTION 4 – TO BE COMPLETED BY APPLICANTS FOR REGULAR CERTIFICATES ONLY

PENNSYLVANIA PROFESSIONAL ENGINEER'S REGISTRATION NO. (If Applicable)	EXAMINED IN CIVIL OR SANITARY ENGINEERING
	YES ☐ NO ☐

PREVIOUS CERTIFICATION

TYPE	CERTIFYING PROGRAM AGENCY	STATE
VOLUNTARY		
MANDATORY		

CERTIFICATE CLASSIFICATION CODE	DATE CERTIFICATE EXPIRES	CERTIFICATE NUMBER

EMPLOYMENT RECORD

INSTRUCTIONS: START WITH YOUR MOST RECENT EMPLOYMENT AND WORK BACK. DESCRIBE YOUR DUTIES AND RESPONSIBILITIES IN EACH JOB. IF YOUR DUTIES CHANGED, DESCRIBE EACH CHANGE AS A NEW POSITION. IF YOU REQUIRE MORE SPACE, USE PLAIN PAPER; BE SURE TO IDENTIFY ANY ADDITIONAL SHEETS WITH THE JOB NUMBER AND YOUR SOCIAL SECURITY NUMBER.

NAME & ADDRESS OF EMPLOYER	YOUR TITLE / JOB NO. 1	DATE OF EMPLOYMENT MO. YR.	TYPE/CLASS OF PLANT / SUPERVISOR'S NAME	NO. YOU SUPERVISE	OFFICIAL USE ONLY EVAL.	VER.
DUTIES & RESPONSIBILITIES						

NAME & ADDRESS OF EMPLOYER	YOUR TITLE / JOB NO. 2	DATE OF EMPLOYMENT FROM TO	TYPE/CLASS OF PLANT / SUPERVISOR'S NAME	NO. YOU SUPERVISE	OFFICIAL USE ONLY EVAL.	VER.
DUTIES & RESPONSIBILITIES						

NAME & ADDRESS OF EMPLOYER	YOUR TITLE / JOB NO. 3	DATE OF EMPLOYMENT FROM TO	TYPE/CLASS OF PLANT / SUPERVISOR'S NAME	NO. YOU SUPERVISE	OFFICIAL USE ONLY EVAL.	VER.
DUTIES & RESPONSIBILITIES						

EK-BWQ-28

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Bureau of Water Quality Management

CONTACT SUBSYSTEM NON-CERTIFICATION INPUT

Figure 31

ALL CARDS

	SYS CODE	IDENTIFICATION	SYS LEVEL
A			
1	2-4	5-34	35-37

CARD 1

	LAST NAME	INITIALS F L	SOCIAL SECURITY	BIRTH DATE MO DAY YR
1				
38	39-58	59-60	61-69	70-75

CARD 2

	ADDRESS LINE 1	HOME TELEPHONE
2		
38	39-58	59-68

CARD 3

	ADDRESS LINE 2	BUSINESS TELEPHONE
3		
38	39-58	59-68

CARD 4

	ADDRESS LINE 3	ZIP CODE
4		
38	39-58	59-63

D — CHECK IF *DELETE* IS TO BE PUNCHED ☐
38

I — CHECK IF *CHANGE* TO INACTIVE ☐
38

A — CHECK IF *CHANGE* TO ACTIVE ☐
38

NOTE

FIELD IDENTIFICATIONS ARE FOR STANDARD NAME AND ADDRESS LISTINGS. FIELDS MAY BE UTILIZED FO[illegible] OTHER DATA AT THE DISCRETION OF THE [illegible]TOR
(Exception – Fields 2-4 may not be changed)

Figure 32

```
CONTACT SUBSYSTEM                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A
PROGRAM ACCP450                 D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S                    PAGE    1
0302                  1513000000000000030          CERTIFIED OPERATOR LISTING                                  AS OF DATE 01/16/74
SYS CODE                 ID CODE                          SYS LEVEL              CERTIFICATE NO.                OPERATOR NO.

001                 67-956-5-01-01-100                    001                    S1350                          S1350
  P C ANEL                                  BUSINESS PHONE   717-225-4711   DATE OF BIRTH    05/26/41   CERTIFICATE CLASS
  1554 W WATER ST                           HOME PHONE       717-225-1508   CERTIFICATE TYPE-REGULAR        PLANT   SEWER
  SPRING GROVE                              COUNTY        -YORK COUNTY-     DATE CERTIFIED   0771           DESIGN CAPACITY  D
  PENNSYLVANIA                              LEVEL  001                      EXPIRATION DATE  74
                        17362               EDUCATION        12             CERTIFICATE KIND S              PLANT TYPE       3
  192-32-1295                               EXPERIENCE /S    /W    /D    /C  REGISTRATION NO
                                            TRAINING                         EXAMINED          NO          CERTIFICATE STATUS   A

001                 55-007-7-01-01-100                    001                    S2007                          S2007
  E  ASHMAN                                 BUSINESS PHONE   412-335-9913   DATE OF BIRTH    10/25/27   CERTIFICATE CLASS
  1104 HUNTINGTON AVE                       HOME PHONE       412-335-7339   CERTIFICATE TYPE-REGULAR        PLANT   SEWER
  NEW KENSINGTON                            COUNTY        -WESTMORELAND COUNTY-  DATE CERTIFIED   0973   DESIGN CAPACITY  D
  PA                                        LEVEL  001                      EXPIRATION DATE  74
                        15068               EDUCATION        10             CERTIFICATE KIND S              PLANT TYPE       3
  196-20-5590                               EXPERIENCE /S 11 /W    /D    /C  REGISTRATION NO
                                            TRAINING                         EXAMINED          NO          CERTIFICATE STATUS   A

001                 00-805-7-01-01-100                    001                    S0001                          S0001
  G P ACHENBACH                             BUSINESS PHONE   215-552-7322   DATE OF BIRTH    05/11/29   CERTIFICATE CLASS
  13  SIXTH FOURTH                          HOME PHONE       215-552-7552   CERTIFICATE TYPE-SPECIAL        PLANT   SEWER
  HAMBURG                                   COUNTY        -BERKS COUNTY-    DATE CERTIFIED   1113           DESIGN CAPACITY  B
  PENNA                                     LEVEL  001                      EXPIRATION DATE  72
                        19526               EDUCATION        12             CERTIFICATE KIND S              PLANT TYPE       6
  173-22-1730                               EXPERIENCE /S 08 /W    /D    /C  REGISTRATION NO
                                            TRAINING                 07      EXAMINED          NO          CERTIFICATE STATUS   A

001                 00-804-7-01-01-100                    001                    S0166                          S0166
  H J ADAM                                  BUSINESS PHONE   215-944-6521   DATE OF BIRTH    04/22/17   CERTIFICATE CLASS
  130 POPLAR ST                             HOME PHONE       215-944-7757   CERTIFICATE TYPE-SPECIAL        PLANT   SEWER
  FLEETWOOD                                 COUNTY        -BERKS COUNTY-    DATE CERTIFIED   1211           DESIGN CAPACITY  D
  PENNA                                     LEVEL  001                      EXPIRATION DATE  74
                        19522               EDUCATION        08             CERTIFICATE KIND S              PLANT TYPE       1
  154-24-2017                               EXPERIENCE /S    /W    /D    /C  REGISTRATION NO
                                            TRAINING                         EXAMINED          NO          CERTIFICATE STATUS   A

001                 57-915-8-01-01-100                    001                    S0002                          S0002
  A J ADAMS                                 BUSINESS PHONE                   DATE OF BIRTH    03/20/18   CERTIFICATE CLASS
  743 PORTAGE ROAD                          HOME PHONE       814-886-7113   CERTIFICATE TYPE-SPECIAL        PLANT   SEWER
```


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Figure 32 (continued)

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CONTACT SUBSYSTEM                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                    PAGE    2
PROGRAM RCDP830            D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S          AS OF DATE 01/16/74
0302                  1010000000000000000          CERTIFIED OPERATOR LISTING
    SYS CODE              ID CODE                  SYS LEVEL              CERTIFICATE NO.              OPERATOR NO.
          [illegible]                    COUNTY      -BLAIR COUNTY-       DATE CERTIFIED   1113          DESIGN CAPACITY  P
          PENNA                          LEVEL  001                       EXPIRATION DATE  74
                        16933            EDUCATION        09              CERTIFICATE KIND S            PLANT TYPE       3
          191-10-8827                    EXPERIENCE /S 03 /A    /D    /C  REGISTRATION NO
                                         TRAINING                         EXAMINED         NO           CERTIFICATE STATUS  A

001            55-915-7-01-01-100                  001                     $1313                        $1313
     J R ADAMS                           BUSINESS PHONE      -   -        DATE OF BIRTH    10/01/25  CERTIFICATE CLASS
          24 OLD TRAIL                   HOME PHONE       717-793-7348    CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
          SHAMOKIN DAM                   COUNTY       -SNYDER COUNTY-     DATE CERTIFIED   1171          DESIGN CAPACITY  E
          PENNA                          LEVEL  001                       EXPIRATION DATE  74
                        17876            EDUCATION        11              CERTIFICATE KIND S            PLANT TYPE       6
          210-16-2137                    EXPERIENCE /S 03 /A    /D    /C  REGISTRATION NO
                                         TRAINING                         EXAMINED         NO           CERTIFICATE STATUS  A

001            07-001-7-02-01-100                  001                     $1894                        $1894
     J R ADAMS                           BUSINESS PHONE   814-944-7131    DATE OF BIRTH    03/27/09  CERTIFICATE CLASS
          2223 WASHINGTON AVE            HOME PHONE       814-944-1597    CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
          ALTOONA                        COUNTY       -BLAIR COUNTY-     DATE CERTIFIED   0473          DESIGN CAPACITY  C
          PA                             LEVEL  001                       EXPIRATION DATE  74
                        16601            EDUCATION        11              CERTIFICATE KIND S            PLANT TYPE       1
          170-12-0651                    EXPERIENCE /S 19 /A    /D    /C  REGISTRATION NO
                                         TRAINING                         EXAMINED         NO           CERTIFICATE STATUS  A

001            06-953-7-01-01-100                  001                     $0581                        $0581
     L P ADAMS                           BUSINESS PHONE      -   -        DATE OF BIRTH    10/24/29  CERTIFICATE CLASS
          131 E PENN AVE                 HOME PHONE       -67-1726        CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
          WEAVERSVILLE                   COUNTY       -BERKS COUNTY-     DATE CERTIFIED   0219          DESIGN CAPACITY  D
          PENNA                          LEVEL  001                       EXPIRATION DATE  74
                        19565            EDUCATION        10              CERTIFICATE KIND S            PLANT TYPE       4
          193-12-5634                    EXPERIENCE /S 19 /A 19 /D 19 /C  REGISTRATION NO
                                         TRAINING                         EXAMINED         NO           CERTIFICATE STATUS  A

001            63-001-7-01-01-100                  001                     $2006                        $2006
     L A ADAMS                           BUSINESS PHONE   412-745-8024    DATE OF BIRTH    07/03/49  CERTIFICATE CLASS
          102 A COLLEGE ST               HOME PHONE       412-745-2441    CERTIFICATE TYPE-REGULAR       PLANT   SEWER
          CANONSBURG                     COUNTY       -WASHINGTON COUNTY- DATE CERTIFIED   0973          DESIGN CAPACITY  P
          PA                             LEVEL  001                       EXPIRATION DATE  74
                        15317            EDUCATION        12              CERTIFICATE KIND S            PLANT TYPE       3
          159-40-4535                    EXPERIENCE /S 01 /A    /D    /C  REGISTRATION NO
                                         TRAINING                         EXAMINED         NO           CERTIFICATE STATUS  A

001            17-938-6-01-01-100                  001                     $0003                        $0003
```


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Figure 32 (continued)

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CONTACT-SUBSYSTEM                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                          PAGE    3
PROGRAM-MCOPR53                D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S              AS OF DATE 01/16/74
0302                  1010000000000000000      CERTIFIED OPERATOR LISTING
    SYS CODE                ID CODE                    SYS LEVEL          CERTIFICATE NO.              OPERATOR NO.

      E C AHLBERG                      BUSINESS PHONE                 DATE OF BIRTH    02/06/11  CERTIFICATE CLASS
        BOX-15                         HOME PHONE      814-342-5243   CERTIFICATE TYPE-SPECIAL     PLANT   SEWER
        LANSE                          COUNTY     -CLEARFIELD COUNTY- DATE CERTIFIED   1113       DESIGN CAPACITY  P
        PEN-SYLVANIA                   LEVEL  001                     EXPIRATION DATE  74
                  16849                EDUCATION        08            CERTIFICATE KIND S           PLANT TYPE      3
        210-05-9237                    EXPERIENCE /S 08 /-    /D    /C REGISTRATION NO
                                       TRAINING                       EXAMINED          NO         CERTIFICATE STATUS   A
    001            09-007-7-01-01-100                  001                  SC410                        SC410

      E F ARENS                        BUSINESS PHONE      -055-0113  DATE OF BIRTH    08/15/03  CERTIFICATE CLASS
        433 GREENE ROAD                HOME PHONE      215-055-3773   CERTIFICATE TYPE-REGULAR     PLANT   SEWER
        WARRINGTON                     COUNTY     -BUCKS COUNTY-      DATE CERTIFIED   0113       DESIGN CAPACITY  E
        PEN SYLVANIA                   LEVEL  001                     EXPIRATION DATE  74
                  18974                EDUCATION        12            CERTIFICATE KIND S           PLANT TYPE      3
        199-05-2565                    EXPERIENCE /S 09 /-    /D    /C REGISTRATION NO
                                       TRAINING                       EXAMINED          NO         CERTIFICATE STATUS   A
    001            67-553-6-01-01-100                  001                  SC562                        SC562

      W C AIKINS                       BUSINESS PHONE      -225-4731  DATE OF BIRTH    03/13/35  CERTIFICATE CLASS
        R-D-2                          HOME PHONE      -225-1691      CERTIFICATE TYPE-SPECIAL     PLANT   SEWER
        SEVEN VALLEYS                  COUNTY     -YORK COUNTY-       DATE CERTIFIED   0219       DESIGN CAPACITY  P
        PEN-SYLVANIA                   LEVEL  001                     EXPIRATION DATE  74
                  17360                EDUCATION        10            CERTIFICATE KIND S           PLANT TYPE      3
        182-23-3535                    EXPERIENCE /S 02 /-    /D    /C REGISTRATION NO
                                       TRAINING                       EXAMINED          NO         CERTIFICATE STATUS   A
    001            63-950-7-02-01-100                  001                  S1126                        S1126

    P ALBERT                           BUSINESS PHONE  412-941-6709   DATE OF BIRTH    01/26/21  CERTIFICATE CLASS
        2812 WALNUT ST                 HOME PHONE      412-835-7366   CERTIFICATE TYPE-SPECIAL     PLANT   SEWER
        BETHEL PARK                    COUNTY     -WASHINGTON COUNTY- DATE CERTIFIED   0771       DESIGN CAPACITY  P
        PENNA                          LEVEL  001                     EXPIRATION DATE  74
                  15102                EDUCATION        12            CERTIFICATE KIND S           PLANT TYPE      3
        182-12-0223                    EXPERIENCE /S 13 /-    /D    /C REGISTRATION NO
                                       TRAINING                       EXAMINED          NO         CERTIFICATE STATUS   A
    001            99-999-7-99-99-999                  001                  S1306                        S1306

    P ALBERT                           BUSINESS PHONE  412-941-6709   DATE OF BIRTH    01/26/21  CERTIFICATE CLASS
        2812 WALNUT ST                 HOME PHONE      412-835-7366   CERTIFICATE TYPE-REGULAR     PLANT   SEWER
        BETHEL PARK                    COUNTY  99                     DATE CERTIFIED   1071       DESIGN CAPACITY  E
        PENNA                          LEVEL  001                     EXPIRATION DATE  74
                  15102                EDUCATION        12.           CERTIFICATE KIND S           PLANT TYPE      3
```

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Figure 32 (continued)

```
CONTACT SUBSYSTEM                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                    PAGE   1
PROGRAM NCOPR50                  D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S        AS OF DATE 01/16/74
*302                  1901000000000000000C        CERTIFIED OPERATOR LISTING

   SYS CODE              ID CODE                  SYS LEVEL          CERTIFICATE NO.                OPERATOR NO.

   001                 01-801-7-01-01-100                001                S0550                          S0550
       F T SHEALER                      BUSINESS PHONE   717-334-6739   DATE OF BIRTH     04/11/13  CERTIFICATE CLASS:
       253 EAST MIDDLE ST               HOME PHONE       717-334-5055   CERTIFICATE TYPE-REGULAR       PLANT   SEWER
       GETTYSBURG                       COUNTY        -ADAMS COUNTY-    DATE CERTIFIED    0115         DESIGN CAPACITY - E
       PENNSYLVANIA                     LEVEL  001                      EXPIRATION DATE   72
                          17325         EDUCATION          12           CERTIFICATE KIND  S            PLANT TYPE          S
                                        EXPERIENCE /S 31 /M    /D    /C  REGISTRATION NO
       176-07-8971                      TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

   001                 01-801-7-01-01-100                001                S1525                          S1525
       F B ALBERTS                      BUSINESS PHONE   717-334-6735   DATE OF BIRTH     01/12/23  CERTIFICATE CLASS:
       223 LALTIMORE STREET             HOME PHONE       717-334-2719   CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
       GETTYSBURG                       COUNTY        -ADAMS COUNTY-    DATE CERTIFIED    0471         DESIGN CAPACITY - D
       PENNA                            LEVEL  001                      EXPIRATION DATE   74
                          17325         EDUCATION          12           CERTIFICATE KIND  S            PLANT TYPE          I
                                        EXPERIENCE /S 09 /M    /D    /C  REGISTRATION NO
       193-14-4425                      TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

   001                 01-801-7-01-01-100                001                S0830                          S0830
       K J SPANDING                     BUSINESS PHONE   717-334-6738   DATE OF BIRTH     05/29/29  CERTIFICATE CLASS:
       744 SUNSET AVENUE                HOME PHONE       717-334-1241   CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
       GETTYSBURG                       COUNTY        -ADAMS COUNTY-    DATE CERTIFIED    0471         DESIGN CAPACITY - D
       PENNSYLVANIA                     LEVEL  001                      EXPIRATION DATE   74
                          17325         EDUCATION          12           CERTIFICATE KIND  S            PLANT TYPE          I
                                        EXPERIENCE /S 05 /M    /D    /C  REGISTRATION NO
       205-22-4811                      TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

   001                 01-802-7-01-01-100                001                S0094                          S0094
       G E OHLER                        BUSINESS PHONE   717-359-5636   DATE OF BIRTH     12/03/15  CERTIFICATE CLASS:
       21 CROUSE PARK                   HOME PHONE       717-359-4524   CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
       LITTLESTOWN                      COUNTY        -ADAMS COUNTY-    DATE CERTIFIED    1113         DESIGN CAPACITY - E
       PENNA                            LEVEL  001                      EXPIRATION DATE   74
                          17340         EDUCATION          08           CERTIFICATE KIND  S            PLANT TYPE          I
                                        EXPERIENCE /S 04 /M    /D 04 /C  REGISTRATION NO
       179-07-1616                      TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

   001                 01-803-7-01-01-100                001                S0076                          S0076
       S . KRICHTEN                     BUSINESS PHONE   717-637-1838   DATE OF BIRTH     03/19/18  CERTIFICATE CLASS:
       230 S FIFTH ST                   HOME PHONE       717-637-2691   CERTIFICATE TYPE-SPECIAL       PLANT   SEWER
```

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Figure 32 (continued)

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CONTACT SUBSYSTEM                    C O M M O N W E A L T H   O F   P E N N S Y L V A N I A                    PAGE    2
PROGRAM 400P140                  D E P A R T M E N T   O F   E N V I R O N M E N T A L   R E S O U R C E S      AS OF DATE 01/16/74
0302                    18010000000000000000          CERTIFIED OPERATOR LISTING

    SYS CODE                ID CODE                    SYS LEVEL                CERTIFICATE NO.                OPERATOR NO.

                 HOSSERSTOWN                    COUNTY      ADAMS COUNTY-       DATE CERTIFIED   1113          DESIGN CAPACITY .-  E
                 PENNSYLVANIA                   LEVEL  001                      EXPIRATION DATE  74.
                                   17344        EDUCATION          07           CERTIFICATE KIND S             PLANT TYPE          4
                 160-16-4354                    EXPERIENCE /S 05 /   /D    /C    REGISTRATION NO
                                                TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

    001                 01-603-7-01-01-100                  001                  50122                          50122

                 R A SMITH                      BUSINESS PHONE   717-637-1428   DATE OF BIRTH    03/19/24  CERTIFICATE CLASS
                 572 DELONE AVENUE              HOME PHONE       717-637-5520   CERTIFICATE TYPE-SPECIAL        PLANT   SEWER
                 HOSSERSTOWN                    COUNTY      ADAMS COUNTY-       DATE CERTIFIED   1113          DESIGN CAPACITY .-  E
                 PENNSYLVANIA                   LEVEL  001                      EXPIRATION DATE  74.
                                   17344        EDUCATION          08           CERTIFICATE KIND S             PLANT TYPE          4
                 205-19-3035                    EXPERIENCE /S 05 /   /D    /C    REGISTRATION NO
                                                TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

    001                 01-920-7-01-01-100                  001                  51642                          51642

                 C R CRUISE                     BUSINESS PHONE   717-677-6803   DATE OF BIRTH    03/25/39  CERTIFICATE CLASS
                 WEST YORK                      HOME PHONE       717-677-7408   CERTIFICATE TYPE-REGULAR        PLANT   SEWER
                 BIGLERVILLE                    COUNTY      ADAMS COUNTY-       DATE CERTIFIED   0772          DESIGN CAPACITY .-  D
                 PENNA                          LEVEL  001                      EXPIRATION DATE  74.
                                   17307        EDUCATION          17           CERTIFICATE KIND S             PLANT TYPE          1
                 177-30-7603                    EXPERIENCE /S 03 /   /D    /C    REGISTRATION NO
                                                TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

    001                 01-900-7-01-01-100                  001                  51635                          51635

                 J L LUPP                       BUSINESS PHONE   717-677-7504   DATE OF BIRTH    02/14/19  CERTIFICATE CLASS
                 BOX 443                        HOME PHONE       717-677-7504   CERTIFICATE TYPE-REGULAR        PLANT   SEWER
                 ASPERS                         COUNTY      ADAMS COUNTY-       DATE CERTIFIED   0772          DESIGN CAPACITY .-  D
                 PENNA                          LEVEL  001                      EXPIRATION DATE  74.
                                   17304        EDUCATION          12           CERTIFICATE KIND S             PLANT TYPE          1
                 188-03-8176                    EXPERIENCE /S 03 /   /D    /C    REGISTRATION NO
                                                TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

    001                 01-912-7-01-01-100                  001                  51579                          51579

                 L E SLOTHOUR                   BUSINESS PHONE   717-259-3202   DATE OF BIRTH    07/03/29  CERTIFICATE CLASS
                 120 E KING BOX 564             HOME PHONE       717-259-4061   CERTIFICATE TYPE-REGULAR        PLANT   SEWER
                 EAST BERLIN                    COUNTY      ADAMS COUNTY-       DATE CERTIFIED   0772          DESIGN CAPACITY .-  E
                 PENNA                          LEVEL  001                      EXPIRATION DATE  74.
                                   17316        EDUCATION          12           CERTIFICATE KIND S             PLANT TYPE          3
                 209-16-5093                    EXPERIENCE /S 05 /   05 /D 05 /C REGISTRATION NO
                                                TRAINING                        EXAMINED          NO           CERTIFICATE STATUS  A

    001                 01-913-7-01-01-100                  001                  50383                          50383
```


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Examples of certificates and wallet renewal forms issued through use of the module are illustrated in Figures 33 and 34, respectively.

2. Name and Address Listing -- This report is a compilation of all inputs submitted by the Contract Subsystem Non-Certification Input. It conforms in all respect to that input. An example partial listing of consulting engineers whose names and addresses are included in the subsystem is given in Figure 35.

3. Activity Listing -- This output report is a summary of activities within the certification program for a given report period. The output from this report includes: type of activity (errors, additions, deletions, changes), operator identification codes, names and addresses, and comments (diagnostics) such as "addition to contact master".

The report also totals the number of activities during the report period, and given output totals such as number of name and address reports and labels, certified operators, and certificates and wallet renewal forms issued.

4. Date Expiration Listing -- This report identifies operators by name and address whose certification requires renewal.

5. Initial Error Listing -- This report cites errors and the reason for rejection in the certification input. It also compiles totals for records input and dropped and errors found.

Uses

The two parts of the Contact Module are the certification portion and the contact portion. As stated earlier, the Division of Water Supply and Sewerage administers the certification program making extensive use of this module. All applications are processed through the system, mailings are made using it, and certificates and wallet renewals are printed by it. All of the certification program files are contained within this WAMIS Module.

Notification of policy changes, hearings, modified or new state and federal regulations, and general interest information can be made by mailings through use of the system. This notification can be broad or selective depending upon the "system levels" that are accessed.

A typical example of the usefulness of the Contact Module occurred following Hurricane Agnes where it was imperative to issue instructions to numerous groups.

Commonwealth of Pennsylvania

SPECIMEN

Department of Environmental Resources

In accordance with the

SEWAGE TREATMENT PLANT AND WATERWORKS OPERATORS CERTIFICATION ACT

and the Regulations of the

STATE BOARD FOR CERTIFICATION

Is Hereby Authorized To Operate

Figure 33

Certificate No.

Date Issued

Chairman, Certification Board

Figure 34

POCKET CARD
(FOR YOUR PERSONAL USE)

STATE BOARD FOR CERTIFICATION OF
SEWAGE TREATMENT PLANT AND WATERWORKS OPERATORS

CERTIFICATE NO S2319

Joseph Smith
443 Herald Ave.
Sunshine City, Pa. 16001

IS AUTHORIZED TO OPERATE

Sewage Treatment Plant E 4

VALID UNTIL June 30, 1974

Commonwealth of Pennsylvania
Department of Health H710 062 10-70

MOORE BUSINESS FORMS, INC.

CERTIFICATE VALIDATION
DISPLAY WITH CERTIFICATE
(REPLACE WHEN CERTIFICATE IS RENEWED)

STATE BOARD FOR CERTIFICATION OF
SEWAGE TREATMENT PLANT AND WATERWORKS OPERATORS

CERTIFICATE NO S2319

Joseph Smith
443 Herald Ave.
Sunshine City, Pa. 16001

VALID UNTIL June 30, 1974

DISPLAY WITH CERTIFICATE
REPLACE WHEN CERTIFICATE IS RENEWED
YOU WILL BE NOTIFIED WHEN TO APPLY FOR RENEWAL

Commonwealth of Pennsylvania
Department of Health H710 062 10-70

POCKET CARD
(FOR YOUR PERSONAL USE)

STATE BOARD FOR CERTIFICATION OF
SEWAGE TREATMENT PLANT AND WATERWORKS OPERATORS

CERTIFICATE NO. S2319

Joseph Smith
443 Herald Ave.
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Joseph Smith
443 Herald Ave.
Sunshine City, Pa. 16001

VALID UNTIL June 30, 1974

DISPLAY WITH CERTIFICATE
REPLACE WHEN CERTIFICATE IS RENEWED
YOU WILL BE NOTIFIED WHEN TO APPLY FOR RENEWAL

Commonwealth of Pennsylvania
Department of Health H710 062 10-70

Figure 35

CONTACT SUBSYSTEM — COMMONWEALTH OF PENNSYLVANIA — PAGE 38

PROGRAM ACCP-50 — DEPARTMENT OF ENVIRONMENTAL RESOURCES — AS OF DATE 08/29/73

*103014 — 0010000000000000000 — NAME AND ADDRESS LISTING

SYSTEM CONTROL FIELDS	NAME AND ADDRESSES	TELEPHONES	
SYS CODE 014 ID CODE CONSULTING ENGINEERS 13461 SYS LEVEL PA	W R WHITLEY 807 RANCROFT RD ERIE PENNA 16509	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 14789 SYS LEVEL PA	W B WHITLOCK 1811 MARKET ST CAMP HILL PENNA 17011	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 06555 SYS LEVEL PA	A L WIESENBERGER ASC INC 3440 HAMILTON BLVD ALLENTOWN PENNA 18103	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 05129 SYS LEVEL PA	R F WILPS 449 COLLEGE AVE GREENSBURG PENNA	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 14933 SYS LEVEL PA	J L WILSON REGIONAL CIVIL ENG 302 N MERCER ST NEW CASTLE PA 16101	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 99-020 SYS LEVEL PA	WITCO CHEMICAL CORP SENIOR PROCESS ENG PETROLIA PENNA 16050	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 11577-E SYS LEVEL PA	YERKES ENG. CO 101 CHARLES DR BRYN MAWR PENNA 19010	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 51-005 SYS LEVEL PA	P H YERRIAMS, INC 1920 CHESTNUT ST PHILADELPHIA PENNA 19103	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 05489 SYS LEVEL PA	W YOCUM 925 ORANGE ST SHAMOKIN PENNA 17872	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /
SYS CODE 014 ID CODE CONSULTING ENGINEERS 05173 SYS LEVEL PA	W W YOST 315 E MARKET ST CLEARFIELD PENNA 16830	BUSINESS - - HOME - -	S.S. NUMBER - - BIRTH DATE / /

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Figure 35 (continued)

CONTACT SUBSYSTEM — COMMONWEALTH OF PENNSYLVANIA — PAGE 39

PROGRAM BCPR50 — DEPARTMENT OF ENVIRONMENTAL RESOURCES — AS OF DATE 08/29/73

*103014 — 081000000000000000 — NAME AND ADDRESS LISTING

SYSTEM CONTROL FIELDS	NAME AND ADDRESSES	TELEPHONES	
SYS CODE 014 ID CODE CONSULTING ENGINEERS 17-003 SYS LEVEL PA	YOST ASSOCIATES, INC DEPOSIT NAT BANK BLD DU BOIS PENNA	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 01403-E SYS LEVEL PA	W ZARDAN [illegible] 4TH AVE [illegible] PENNA 15108	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 05133-E SYS LEVEL PA	J G ZABETAKIS [illegible] LAKEVIEW AVE [illegible] CASTLE PENNA 16101	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 04940 SYS LEVEL PA	W J ZIMMERMAN PUNXSUTAWNEY PENNA 15767	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 03406-E SYS LEVEL PA	K J ZITZLER PHILA WATER DEPT CITY HALL ANX RM1000 PHILADELPHIA PA 19107	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 99-008 SYS LEVEL TX	[illegible] DYNAMICS [illegible] HEALTH CARE P O BOX 748 FORT WORTH TEXAS 17601	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 99-002 SYS LEVEL WV	[illegible] [illegible] P O BOX [illegible] HUNTINGDON W V 25712	BUSINESS HOME	S.S. NUMBER BIRTH DATE
SYS CODE 014 ID CODE CONSULTING ENGINEERS 99-019 SYS LEVEL WV	WHEELING PITTSBURGH STEEL CORP DIV OF ENV CONTROL WHEELING - WISCONSIN 26003	BUSINESS HOME	S.S. NUMBER BIRTH DATE

NAME FILE

General Description

The Name File is used in support of all systems as needed, but is maintained independently of them. Elements of the Name File can be used in all modules. The types of names maintained are counties, municipalities, regions, field offices, streams, and stations.

Input and output forms and reports which comprise the Name File are shown in Table 10.

Input

Four basic inputs are used in the Name File: county and municipality, network, indicator (parameter) and basin. Inputs may come from a variety of sources within the Bureau, and are intended to file information for each category.

The county and municipality input (Figure 36) includes an identification number for the county (two digit) and the municipality (three digit). In addition, the name of the county or municipality is listed along with an abbreviation. Appropriate numerical codes for cognizant region and field office are included.

Network stations are included as part of the Name File. For each station, the following information is input into WAMIS by the Division of Water Quality (Figure 37): a pre-determined station identification code number, station description (e.g., "Trenton Avenue Bridge at Morrisville"), stream name, type of station, region, field office, latitude-longitude, and map number.

An indicator is a STORET parameter such as sample weight in pounds, water temperature in degrees Fahrenheit, or chemical concentration in mg/l. In order to input into the Name File, the following information must be coded in the field: indicator code number, indicator name (description), and the value and decimal locator (Figure 38). This information is loaded from EPA's STORET parameter code file to provide consistency between agencies.

The basin input into the Name File simply is coded numbers for the major and minor basins indicated and the appropriate stream (Figure 39). Also included is the stream name.

Output

Name File output for network stations, counties, and municipalities, indicators, and basin names conform exactly to the information input.

Table 10. NAME FILE INPUT AND OUTPUT FORMS AND REPORTS

<u>Input</u>
County or Municipality Name File Input
Network Name File Input
Indicator Name File Input
Basin Name File Input
<u>Output</u>
County and Municipality Listing
Water Quality Networks Listing
Indicator Listing
Basin Name Listing
Name File Listing Control Totals
Name File Error Listing
Latitude-Longitude Cross-Referenced to Identification Code

M710.060.2 7-70

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH
SANITARY ENGINEERING

NAME FILE INPUT - COUNTY OR MUNICIPALITY

Figure 36

	(CIRCLE ONE)		CO	MUN	NAME COUNTY OR MUNICIPALITY	ABBREVIATION CO OR MUN	REGION	FIELD OFFICE
N 1	A C 2 D	I 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	I 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	I 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	I 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	3 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	3 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	3 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	3 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	3 3	4-5	6-8	9-33	34-41	42	43
N 1	A C 2 D	3 3	4-5	6-8	9-33	34-41	42	43

NOTE: MUN WILL BE CODED "000" WHEN COUNTY IS APPLICABLE

ER-BWQ-39 Rev. 6-73

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Bureau of Water Quality Management
NAME FILE INPUT – NETWORK

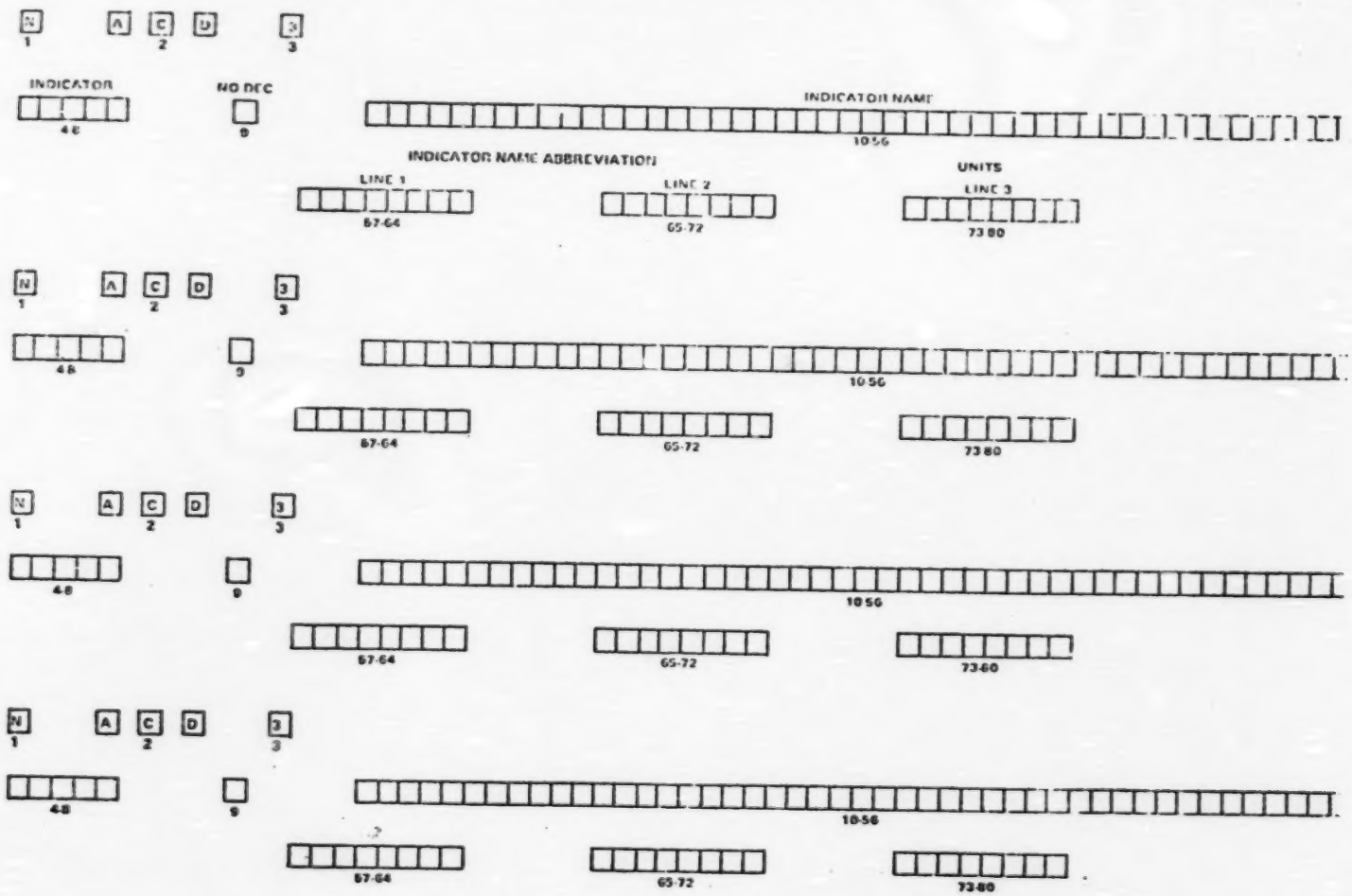
Figure 37

1	2	3	4-7	8-22	23-47	48-52	53	54	55	56-60
N	A C	D	2	NETWORK NO.	STREAM NAME	STREAM DESCRIPTION	ACTUAL LOC	TYPE	HS REGION	FIELD OFFICE	MAP NUMBER
N	A C	D	2							
N	A C	D	2							
N	A C	D	2							
N	A C	D	2							
N	A C	D	2							
N	A C	D	2							
N	A C	D	2							

DEPARTMENT OF [illegible] NATURAL RESOURCES
SANITARY [illegible] ENGINEERING

Figure 38

NAME FILE INPUT – INDICATOR



DEPARTMENT OF HEALTH
SANITARY ENGINEERING

Figure 39

NAME FILE INPUT – BASIN

	(CIRCLE ONE)	BASIN MAJ (4-5)	BASIN MIN (6-7)	BASIN STREAM (8-10)	BASIN NAME (11-25)
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			
N (1)	A C (2) D	4 (3)			

The File merely compiles and arranges the input data. Output examples for each are shown in Figures 40 through 43.

The error listing gives an identification of the input information and prints out the reason for rejection, while the Name File Control Totals Report (Figure 44) summarizes all subsystem transactions by appropriate category.

Latitude-longitude coordinates are cross-referenced to identification codes for facilities. Although this is not a part of the Name File, the purpose served is similar. This cross-referencing is used in support of all modules. Figure 45 shows printouts on a state-wide and regional basis.

Uses

As stated earlier, the principal use of the Name File is in support of all modules. Information is filed and accessed by programs included in each module as needed.

Figure 40

NMRR20 COUNTY AND MUNICIPALITY LISTING RUN DATE 11/30/73 PAGE 1

CO MUN	ABRV	NAME	REGION	FIELD OFFICE
01-900	NO ABBR	ADAMS COUNTY	3	4
01-801	GTYSBG	GETTYSBURG BORO	3	4
01-802	LTLSTWN	LITTLESTOWN BORO	3	4
01-803	MCSHMSTN	MCSHERRYSTOWN BORO	3	4
01-904	ABBTSTN	ABBOTTSTOWN BORO	3	4
01-905	ARNTSVL	ARNOTSVILLE BORO	3	4
01-906	BNDRSVL	BENDERSVILLE BORO	3	4
01-907	BRWK T	BERWICK TWP.	3	4
01-908	BGIPVL	BIGLERVILLE BORO	3	4
01-909	BTLR T	BUTLER TWP.	3	4
01-910	CMBGD T	CUMBERLAND TWP.	3	4
01-911	CMBLE T	CUMBERLAND TWP.	3	4
01-912	EBRLN	EAST BERLIN BORO	3	4
01-913	FAIRFLD	FAIRFIELD BORO	3	4
01-914	FRKLN T	FRANKLIN TWP.	3	4
01-915	FRDM T	FREEDOM TWP.	3	4
01-916	GRNNY T	GERMANY TWP.	3	4
01-917	HMTLN T	HAMILTON TWP.	3	4
01-918	HOLTON T	HAMILTONBAN TWP.	3	4
01-919	HGHLC T	HIGHLAND TWP.	3	4
01-920	HTGTN T	HUNTINGTON TWP.	3	4
01-921	LTMR T	LATIMORE TWP.	3	4
01-922	LBRTY T	LIBERTY TWP.	3	4
01-923	MNLN T	MENALLEN TWP.	3	4
01-924	MT JOY T	MT JOY TWP.	3	4
01-925	MT PLS T	MT PLEASANT TWP.	3	4
01-926	NEW OXFD	NEW OXFORD BORO	3	4
01-927	OXFD T	OXFORD TWP.	3	4
01-928	RDNG T	READING TWP.	3	4
01-929	STRBN T	STRABAN TWP.	3	4
01-930	TYRN T	TYRONE TWP.	3	4
01-931	UNION T	UNION TWP.	3	4
01-932	YORK SPS	YORK SPRINGS BORO	3	4
01-933	BUNNLVLL	BUNNEAUVILLE BORO	3	4
02-900	NO ABBR	ALLEGHENY COUNTY	5	6
02-901	PGH	PITTSBURGH	5	6
02-111	PN HLS T	PENN HILLS TWP.	5	6
02-112	MCKSPORT	MCKEESPORT	5	6
02-113	MT LEB T	MT LEBANON TWP.	5	6
02-114	ROSS T	ROSS TWP.	5	6
02-115	W MFLN	WEST MIFFLIN BORO	5	6
02-116	WLKNSBG	WILKINSBURG BORO	5	6
02-117	BALDWIN	BALDWIN BORO	5	6
02-118	BELLEVUE	BELLEVUE BORO	5	6
02-119	BETHEL	BETHEL PARK BORO	5	6
02-120	BRADDOCK	BRADDOCK BORO	5	6
02-121	BRNTWOOD	BRENTWOOD BORO	5	6
02-122	CARNEGIE	CARNEGIE BORO	5	6
02-123	CSTL SHN	CASTLE SHANNON BORO	5	6
02-124	CLAIRTON	CLAIRTON	5	6
02-125	DORMONT	DORMONT BORO	5	6
02-126	DUQUESNE	DUQUESNE	5	6
02-127	HARSN T	HARRISON TWP.	5	6
02-128	MCKS RKS	MCKEES ROCKS BORO	5	6
02-129	MONROEVL	MONROEVILLE BORO	5	6
02-130	MUNHALL	MUNHALL BORO	5	6

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Figure 40 (continued)

NHRP20 COUNTY AND MUNICIPALITY LISTING RUN DATE 11/30/75 PAGE 2

CO MUN	ABRV	NAME	REGION	FIELD OFFICE
02-131	N BROCK	NORTH BRADDOCK BORO	5	6
02-132	N VRSL T	NORTH VERSAILLES TWP.	5	6
02-133	PLUM	PLUM BORO	5	6
02-134	SCT T	SCOTT TWP.	5	6
02-135	SHALER T	SHALER TWP.	5	6
02-136	STWE T	STOWE TWP.	5	6
02-137	SWSVL	SWISSVALE BORO	5	6
02-138	TRTL CRK	TURTLE CREEK BORO	5	6
02-139	WHTHLL	WHITEHALL BORO	5	6
02-140	ASPNWL	ASPINWALL BORO	5	6
02-141	AVALON	AVALON BORO	5	6
02-142	BELVDR T	BELVDR TWP.	5	6
02-143	BEN AVON	BEN AVON BORO	5	6
02-144	BRKNRDG	BRACKENRIDGE BORO	5	6
02-145	BRDGVLE	BRIDGEVILLE BORO	5	6
02-146	CHRSWICK	CHRSWICK BORO	5	6
02-147	CHURCHL	CHURCHILL BORO	5	6
02-148	COHALPLS	COHAMPILIS BORO	5	6
02-149	CRAFTON	CRAFTON BORO	5	6
02-150	CRESCT T	CRESCENT TWP.	5	6
02-151	DRVSBG	DRAVISBURG BORO	5	6
02-152	E DFER T	EAST DFER TWP.	5	6
02-153	E MCKSPT	EAST MCKESPORT BORO	5	6
02-154	E PGH	EAST PITTSBURGH BORO	5	6
02-155	EDGEWOOD	EDGEWOOD BORO	5	6
02-156	ELZBTH	ELIZABETH BORO	5	6
02-157	EMSWRTH	EMSWORTH BORO	5	6
02-158	ETNA	ETNA BORO	5	6
02-159	FRST HLS	FOREST HILLS BORO	5	6
02-160	FOX CHPL	FOX CHAPEL BORO	5	6
02-161	GLSPORT	GLASSPORT BORO	5	6
02-162	GRNTREE	GREEN TREE BORO	5	6
02-163	HMSTEAD	HOMESTEAD BORO	5	6
02-164	INGRAM	INGRAM BORO	5	6
02-165	JFFRSN	JEFFERSON BORO	5	6
02-166	KNOX T	KENNOY TWP.	5	6
02-167	LIBRTY	LIBERTY BORO	5	6
02-168	MCNALD B	MCNAWALD BORO *PART 6380	5	6
02-169	MILLVALE	MILLVALE BORO	5	6
02-170	MT OLVR	MT OLIVER BORO	5	6
02-171	NAKNL TT	NAKNOTT BORO	5	6
02-172	OHARA T	OHARA TWP.	5	6
02-173	PITCAIRN	PITCAIRN BORO	5	6
02-174	PLST HLS	PLEASANT HILLS BORO	5	6
02-175	PRRT VUE	PORT VUE BORO	5	6
02-176	RANKIN	RANKIN BORO	5	6
02-177	RSRV T	RESERVE TWP.	5	6
02-178	SHCKLY	SHICKLEY BORO	5	6
02-179	SHRPSBG	SHARPSBURG BORO	5	6
02-180	SPRNGDL	SPRINGDALE BORO	5	6
02-181	TARENTUM	TARENTUM BORO	5	6
02-182	TRFD PT	TRAFFORD BORO *PART 6581	5	6
02-183	VERONA	VERONA BORO	5	6
02-184	W HMSTD	WEST HOMESTEAD BORO	5	6
02-185	W VIEW	WEST VIEW BORO	5	6
02-186	WHT OAK	WHITE OAK BORO	5	6

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Figure 41

NWRRZD — WATER QUALITY NETWORKS — RUN DATE 08/13/73 — PAGE 1

NETWORK ID CODE	DESCRIPTION	STREAM	TYPE	REGION	FIELD OFFICE	LAT LONG	MAP NO.
09-826-0-01-00-101	TRENTON AV BR AT MORRSVLE	DELAWARE RIVER	1	1	1	4013090-07446420	02241
09-942-0-01-00-102	PR212 AT RIEGLESVILLE NJ	DELAWARE RIVER	1	1	1	4033300-07511780	02233
92-977-0-01-00-103	LSR & 209 BR AT PRT JERVS	DELAWARE RIVER	1	2	2	4127140-07441920	03259
94-994-0-01-00-104	PR191 BR IN BUCKINGHM TWP	DELAWARE RIVER	1	2	2	4192340-07512210	01733
19-911-0-01-00-105	PC RR BR IN BUTLINGHT TWP	BRANDYWINE CRK	2	1	1	3952540-07532350	02212
32-914-0-01-00-106	PR842 BR AT MARSHEY VILGE	EB BRANDYWINE C	2	1	1	3955340-07532470	02214
19-914-0-01-00-107	PR842 BR NEAR MARSHEY VIL	EB BRANDYWINE C	1	1	1	3955310-07532550	02214
19-934-0-01-00-108	LR19141 BR IN COCHRANSTOWN	EB BRANDYWINE C	1	1	1	4007050-07542310	02213
23-079-0-01-00-109	PA DOTA & CR RD AT CHESTER	CHESTER CREEK	1	1	1	3951510-07523510	02223
91-071-0-01-00-110	FALLS BR IN PHILADELPHIA	SCHUYLKILL RIVR	9	1	1	4011000-07511120	02233
46-075-0-01-00-111	PA TUNEL ST BR AT POTTSTWN	SCHUYLKILL RIVR	1	1	1	4014300-07519550	02214
09-071-0-01-00-112	BIRCHER ST BR AT READING	SCHUYLKILL RIVR	1	2	3	4017210-07556700	02203
06-943-0-01-00-113	TR553 BRIDGE AT BERNE	SCHUYLKILL RIVR	2	2	3	4031210-07555550	02203
94-071-0-01-00-114	BR BTWN POTTSVL-PALO ALTO	SCHUYLKILL RIVR	2	3	3	4041010-07611120	06194
91-071-0-01-00-115	FALLS MILL BR IN PHILA	NESSAHICKON CR	2	1	1	4004450-07513480	02223
45-963-0-01-00-116	LR45215 BR AT GRATERFORD	PENNYPACK CREEK	2	1	1	4013440-07527170	02224
20-973-0-01-00-117	LR20039 BR IN BERN TWP	TULPEHOCKEN CR	2	2	3	4029280-07536400	07203
06-943-0-01-00-118	NR READING AT POWER PLANT	MAIDEN CREEK	9	2	3	4025280-07536400	07204
94-953-0-01-00-119	PR463 BR IN WALKER TWP	L SCHUYLKILL RV	2	3	3	4045160-07556460	05203
94-970-0-01-00-120	PR183 BRIDGE AT CRESSONA	NB SCHUYLKILL R	2	3	3	4038030-07611310	06194
09-971-0-01-00-121	PR213 BR AT LANDSDALE	MESHANICHY CREEK	2	1	1	4010260-07497260	03244
09-913-0-01-00-122	ON E OF PR413 & 611 JCT	TOHICKON CREEK	2	1	1	4026010-07507110	07231
45-[illegible]-0-01-00-123	PR140 ST BR IN EASTON	LEHIGH RIVER	1	2	3	4041120-07511240	05204
45-[illegible]-0-01-00-124	PR191 BR AT BETHLEHEM	LEHIGH RIVER	1	2	3	4035020-07503350	04223
45-934-0-01-00-125	PR BR AT SOUTH & WALNT PT	LEHIGH RIVER	2	2	3	4045040-07534110	05212
45-919-0-01-00-126	PR115 BR AT STODDARTSVILL	LEHIGH RIVER	1	2	2	4107450-07537330	04211
45-071-0-01-00-127	LR45210 BR AT BETHLEHEM	SAUCON CREEK	2	3	3	4037110-07520110	05222
45-071-0-01-00-128	E LEHIGH ST BR IN BETHLHM	MONOCACY CREEK	2	3	3	4037210-07522540	05223
39-071-0-01-00-129	LR20015 BR IN S BRITHLL T	L LEHIGH CREEK	2	2	3	4034050-07509100	05223
39-071-0-01-00-130	PR145 BR AT ALLENTOWN	JORDAN CREEK	2	2	3	4037470-07525450	05223
13-934-0-01-00-131	TR372 BR AT PALMERTON	AQUASHICOLA CR	2	2	3	4047360-07534420	05212
13-910-0-01-00-132	TR163 SPUR BR AT PARRYVLE	POHOPOCO CREEK	2	2	3	4045570-07540210	05213
13-917-0-01-00-133	ELV PR29 IN MAUCH CHUNK T	NESQUEHONING CR	1	2	3	4052310-07545470	05202
13-[illegible]-0-01-00-134	BR BR AT BEAVERSLY	BLACK CREEK	2	3	3	4055520-07549700	05201
45-[illegible]-0-01-00-135	PR611 BR AT EASTON	BUSHKILL CREEK	2	2	3	4041450-07512100	06234
45-922-0-01-00-136	NR BR AT NTH L ST BETHL T	MARTINS CREEK	2	3	3	4044470-07510700	05233
45-917-0-01-00-137	LR45061 NR MINISINK HILLS	BROADHEAD CREEK	2	2	2	4059550-07506350	05234
45-918-0-01-00-138	PR191 BR NR ANALOMINK	BROADHEAD CREEK	2	2	2	4102070-07512490	04233
45-910-0-01-00-139	TR523 BR NR SMITHMAKERS	BUSHKILL CREEK	2	2	2	4108170-07502170	04232
45-918-0-01-00-140	PATH ST BR IN WHITE MILLS	LACKAWAXEN RIVR	2	2	2	4131370-07511700	02233
52-974-0-01-00-141	TR559 BR IN GREENE TWP	HALLEY BRANCH C	9	2	2	4120100-07120550	03722
45-919-0-01-00-142	PR740 BR AT BLAKESLEE	TUNKHANNA CREEK	2	2	2	4130320-07108310	04212
91-071-0-01-00-143	STRAWBERRY BR AT PHILADEL	SCHUYLKILL RIVR	1	1	1	3959420-07511400	04234
06-951-0-01-00-144	TR301 BR IN SPRING TWP	CACOOSING CREEK	2	3	3	4021550-07555410	07203
45-924-0-01-00-145	LR45301 BR IN L SAUCON T	SAUCON CREEK	2	3	3	4033250-07521440	05222
45-[illegible]-0-01-00-146	OFF PR191 AT ST ANN SHRIN	MONOCACY CREEK	2	3	3	4041170-07520260	05221
42-975-0-01-00-147	AT MOUTH IN LACKAWAXEN T	LACKAWAXEN RIVR	2	2	2	4123120-07495710	03744
45-922-0-01-00-148	PC RR BR AT PPSL PWR PLNT	DELAWARE RIVER	1	3	3	4047020-07506590	05232
19-934-0-01-00-149	LR15016 BR IN LOWR BRTN T	WHITE CLAY CR	1	1	1	3944540-07546120	10201
19-933-0-01-00-150	LR15037 BR IN KENNETT TWP	RED CLAY CREEK	2	1	1	3943000-07541310	09213
19-911-0-01-00-151	SAME AS STATION #105	BRANDYWINE CR	9	1	1	3952090-07535351	09212
19-914-0-01-00-152	JEFFERIES BR IN E MARPD T	EB BRANDYWINE C	2	1	1	3954200-07533130	09214
19-914-0-01-00-153	SAME AS STATION #106	NB BRANDYWINE C	9	1	1	3955540-07539471	09214
19-932-0-01-00-154	ILSON RD BR TREMYFERIN T	VALLEY CREEK	2	1	1	4004530-07527250	09223
19-924-0-01-00-155	PA NEAR WILSONS CORNER	FRENCH CREEK	2	1	1	4007050-07536060	09211
19-929-0-01-00-156	LR15015 BR IN FRANKLIN T	BIG ELK CREEK	2	1	1	3943470-07546120	10201

Figure 41 (continued)

NETWORK ID CODE	DESCRIPTION	STREAM	TYPE	REGION	FIELD OFFICE	LAT LONG	MAP NO.
15-951-0-01-00-137	CREEK RD BR IN THORNBRY T	NB CHESTER CR	2	1	1	3939450-0759200	09724
23-917-0-01-00-138	BR WATPUL E COELSTN RD IN	RIDLEY CREEK	2	1	1	3952280-0759260	09723
23-973-0-01-00-139	AT GARRET TR IN U DARBY T	DARBY CREEK	2	1	1	3935040-0751800	09721
46-941-0-01-00-140	RT PLEASANT AV BR WITPN T	WISSAHICKON CR	2	1	1	4007200-0751590	09734
46-943-0-01-00-141	SAME AS STATION #110	PERKIOMEN CREEK	9	1	1	4013440-0752771	09724
46-938-0-01-00-142	GARGES RD BR L SALFORD T	EB PERKIOMEN CR	2	1	1	4015450-0752390	09723
46-937-0-01-00-143	ARCOLA RD BR L PROVIDNC T	SKIPPACK CREEK	2	1	1	4005610-0752640	09724
51-921-0-01-00-144	CASTOR AV BR IN PHILADEL	FRANKFORD CREEK	2	1	1	4001000-0750410	09732
51-921-0-01-00-145	FRANKFORD AV BR IN PHILA	PENNYPACK CREEK	2	1	1	4002850-0750150	09732
46-939-0-01-00-146	PARK BR IN L MORELAND TWP	PENNYPACK CREEK	2	1	1	4007140-0750210	09732
09-921-0-01-00-147	ALL HOUSE RD BR POWELSTON	NESHAMINY CREEK	2	1	1	4017170-0750760	09733
09-927-0-01-00-148	BR W MAPLE AV BR PEQUEA T	NESHAMINY CREEK	9	1	1	4012240-0745751	09734
09-937-0-01-00-149	WALTON RD BR NORTHAMPTON T	L NESHAMINY CR	2	1	1	4014240-0750150	09731
09-915-0-01-00-170	SAME AS STATION #122	TOHICKON CREEK	9	1	1	4026010-0750711	09731
09-923-0-01-00-171	COVED BR RD BR HAYCOCK T	TOHICKON CREEK	2	1	1	4027180-0751640	09721
23-917-0-01-00-172	COTTN MILLS RD BR CHSTR T	CHESTER CREEK	2	1	1	3952030-0752410	09723
51-921-0-01-00-173	SAME AS STATION #119	WISSAHICKON CR	9	1	1	4006440-0751431	09733
36-931-0-01-00-201	REC STATION AT MARIETTA	SUSQUEHANNA R	9	3	3	4013140-0761120	09172
22-931-0-01-00-202	WALNUT ST BR IN HARRISBRG	SUSQUEHANNA R	1	3	3	4015270-0763120	09163
49-933-0-01-00-203	MAIN ST BR IN SUNBURY	SUSQUEHANNA R	1	4	5	4051150-0764820	09152
39-940-0-01-00-204	PR324 IN MARTIC TWP	PEQUEA CREEK	2	3	3	3953370-0762140	09181
36-930-0-01-00-205	PELOW LANCASTER WATER WRK	CONESTOGA CREEK	2	3	3	4003000-0761590	09182
36-933-0-01-00-206	PA441 BR IN E HEMPFIELD T,P	CHICKIES CREEK	2	3	3	4013130-0761730	09172
67-935-0-01-00-207	BR AT LR66721 STA639 INTR	CODORUS CREEK	2	3	4	4007370-0764370	09173
67-946-0-01-00-208	TR468 BR AT MARTIN	NB CODORUS CR	2	4	4	3953140-0765090	09161
67-938-0-01-00-209	AT YORK WATER CO PUMP STA	SB CODORUS CR	2	3	4	3955140-0764470	09174
67-917-0-01-00-210	PA181 BR IN E MANCHESTR T	W CODORUS CR	2	3	4	4004920-0764370	09173
22-932-0-01-00-211	PA441 BR AT MIDDLETOWN	SWATARA CREEK	2	3	3	4011100-0764520	09174
67-916-0-01-00-212	RD5111 BR IN FAIRVIEW TWP	YELLOW BREECHES	2	4	4	4012270-0761330	09161
21-915-0-01-00-213	TR574 BR IN MIDDLESEX TWP	CONODOGUINET CR	2	3	4	4015040-0770110	09152
50-918-0-01-00-214	PA34 BR AT NEWPORT	JUNIATA RIVER	2	3	4	4028620-0770460	09151
31-979-0-01-00-215	LR31084 BR AT MAPLETON	JUNIATA RIVER	2	4	4	4028420-0775740	09124
31-971-0-01-00-216	TR2135 BR AT HUNTINGDON	JUNIATA RIVER	2	4	4	4025050-0781190	09111
31-940-0-01-00-217	PA24 BR AT SPRUCE CREEK B	L JUNIATA RIVER	2	4	4	4038331-0781110	09113
07-976-0-01-00-218	LS229 BR IN ANTIS TWP	L JUNIATA RIVER	2	4	5	4037390-0781420	09112
07-804-0-01-00-219	PA350 BR AT TYRONE	S BALD EAGLE CR	2	4	5	4047140-0814150	09114
44-971-0-01-00-220	LS522 BR AT LEWISTOWN	KISHACOQUILLS C	2	4	4	4034220-0773390	09132
31-913-0-01-00-221	PA944 BR IN CROMWELL TWP	AUGHWICK CREEK	9	4	4	4017450-0775320	09124
31-920-0-01-00-222	BR AT TR430 E 431 INTERSC	RAYSTOWN BRANCH	9	4	4	4025350-0781470	09111
05-913-0-01-00-223	PA913 BR NEAR SEXTON	RAYSTOWN BRANCH	2	4	4	4012570-0781560	09101
07-924-0-01-00-224	PC 83 BR IN MCCONNELLSBURG	FRANKSTOWN BR	2	5	5	4028340-0781590	07114
22-837-0-01-00-225	PA147 BR AT MILLERSBURG	WICONISCO CREEK	2	3	3	4027140-0767390	09153
49-918-0-01-00-226	TR482 E 302 BR AT DALMATI	MAHANTANGO CR	2	4	3	4039470-0765430	09163
49-913-0-01-00-227	PA147 BR IN JACKSON TWP	MAHANOY CREEK	1	4	5	4043340-0765160	09161
55-913-0-01-00-228	LS11 E 15 BR IN PENN TWP	MIDDLE CREEK	2	5	5	4045270-0762110	09152
55-912-0-01-00-229	LS11 E 15 BR IN MONROE T	PENNS CREEK	2	5	5	4043300-0761700	09162
42-927-0-01-00-230	REC STA IN SHAMOKIN TWP	SHAMOKIN CREEK	1	4	5	4048370-0763540	09172
33-933-0-01-00-231	TR561 BR IN MAHON TWP	CONESTOGA CREEK	2	3	3	3957410-0761760	09181
36-940-0-01-00-232	PA372 BR AT HOLTWOOD	SUSQUEHANNA R	1	2	2	3943010-0761940	09162
31-901-0-01-00-233	REC STA AT HUNTINGDON	STANDING STONE C	9	4	4	4031250-0775150	09123
05-972-0-01-00-234	REC STA AT BELDEN	DUNKING CREEK	9	4	4	4004170-0782940	09103
05-979-0-01-00-235	REC STA AT GARSVILLE	BANSH CREEK	9	4	4	3957200-0761510	09101
31-924-0-01-00-236	REC STA AT MARKLESBURG	GREAT TAQUHN CR	9	4	4	4021000-0757500	07113
36-933-0-01-00-237	LR36709 BR IN LEACOCK TWP	MILL CREEK	2	3	3	4007640-0764950	09153
36-932-0-01-00-238	LR36703 BR W ANNVILLE TWP	QUITTAPAHILLA C	2	3	3	4041020-0762520	09172
21-926-0-01-00-239	AT MOUTH IN S MIDDLETON T	MOUNTAIN CREEK	2	4	4	4008410-0771430	08154

Figure 41 (continued)

NMRR20 INDICATOR LISTING RUN DATE 11/30/73 PAGE 2

CODE	ABBREVIATIONS			DEC LOC	DESCRIPTION
00064	DEPTH OF	STREAM	MEAN(FT)	XXXXX.X	DEPTH OF STREAM, MEAN (FT)
00065	STREAM	STAGE	FEET	XXXXX.X	STAGE, STREAM (FEET)
00066	DEPTH	BOTSAMPL	FEET	XXXXX.XX	DEPTH OF BOTTOM SAMPLE IN FEET (BELOW STREAMBED)
00067	TIME	STAGE	CODE	XXXXXX.	STAGE, TIME (REFER TO APPENDIX FOR CODES)
00068	MAX SAMP	DEPTH	FEET	XXXXX.X	DEPTH, MAXIMUM, OF SAMPLE (FEET)
00069	SEA	CODE		XXXXXX.	SEA WAVES(0=NONE;1=0-3"12=4-20"13=21-48"24=5-8')
00070	TURB	JKSN	JTU	XXXXX.X	TURBIDITY, (JACKSON CANDLE UNITS)
00074	TURB	TRANS	%	XXXXX.X	TURBIDITY, TRANSMISSOMETER, PERCENT TRANSMISSION
00075	TURB	HIGE	PPM SIO2	XXXXX.X	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)
00076	TURB	TRFTDMTR	HACH FTU	XXXXX.X	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)
00077	TRANSP	SECCHI	INCHES	XXXXXX.	TRANSPARENCY, SECCHI DISC (INCHES)
00078	COLOR	FIEL-ULE	SCALE	XXXXXX.	COLOR, WATER (FIEL-ULE SCALE)
00080	COLOR	PT-CO	UNITS	XXXXXX.	COLOR (PLATINUM-COBALT UNITS)
00081	AP COLOR	PT-CO	UNITS	XXXXXX.	COLOR,APPARENT(UNFILTERED SAMPLE) PLAT-COB UNITS
00085	ODOR	THRSH NO	RM. TEMP	XXXXX.X	ODOR (THRESHOLD NUMBER AT ROOM TEMPERATURE)
00086	ODOR	THRSH NO	AT 60C	XXXXX.X	ODOR (THRESHOLD NUMBER AT 60 DEG C)
00087	ODOR	THRSH NO	AT 40C	XXXXX.X	ODOR (THRESHOLD NUMBER AT 40 DEG C)
00090	REDOX	ORP	MV	XXXXXX.	OXIDATION REDUCTION POTENTIAL (MILLIVOLTS)
00094	CNDUCTVY	FIELD	MICRMHO	XXXXXX.	CONDUCTIVITY, FIELD (MICROMHOS)
00095	CNDUCTVY	AT 25C	MICRMHO	XXXXXX.	CONDUCTIVITY (MICROMHOS AT 25 DEG C)
00096	SALINITY	AT 25C	MG/ML	XXXXXX.	SALINITY AT 25 DEGREES C -MG/ML
00110	SLUDGED	AREA	SQ FT	XXXXXX.	SLUDGE BED (AREA IN SQUARE FEET)
00112	SLUDGED	AV DEPTH	FT	XXXXX.X	SLUDGE BED (AVERAGE DEPTH IN FEET)
00115	SAMPLE	TREAT-	MENT	XXXXXX.	SAMPLE TREATMENT CODE (1=RAW,2=TREATED)
00290	DO UPTAK	LGHT BOT	MG/L	XXXXX.X	DISSOLVED OXYGEN UPTAKE,LIGHT BOTTLE,IN 24HR-MG/L
00292	DO UPTAK	DARK BOT	MG/L	XXXXX.X	DISSOLVED OXYGEN UPTAKE,DARK BOTTLE,IN 24HR-MG/L
00295	O2		ML/L	XXXX.XX	OXYGEN, DISSOLVED (ML/L)
00299	O2	PROBE	MG/L	XXXXX.X	OXYGEN, DISSOLVED-ANALYSIS BY PROBE (MG/L)
00300	O2		MG/L	XXXXX.X	OXYGEN, DISSOLVED (MG/L)
00301	O2	SATUR	PERCENT	XXXXX.X	OXYGEN, DISSOLVED (PERCENT OF SATURATION)
00302	IRON	MG/L		XXXXX.X	OXYGEN, IMMEDIATE DEMAND (MG/L)
00303	BOD	1 DAY	MG/L	XXX.XXX	BIOCHEMICAL OXYGEN DEMAND (MG/L, 1 DAY - 20DEG C)
00304	BOD	2 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 2 DAY - 20DEG C)
00305	BOD	3 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 3 DAY - 20DEG C)
00306	BOD	4 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 4 DAY - 20DEG C)
00310	BOD	5 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 5 DAY - 20DEG C)
00311	DISS BOD	5 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND, DISSOLVED 5 DAY (MG/L)
00312	BOD	6 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 6 DAY - 20DEG C)
00315	BOD	7 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 7 DAY - 20DEG C)
00316	BOD	8 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 8 DAY - 20DEG C)
00317	BOD	9 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 9 DAY - 20DEG C)
00320	BOD	ULT FRST	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L ULT. FIRST STAGE)
00321	BOD	ULT 2ND	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L ULT.-SECOND STAGE)
00322	BOD	10 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 10 DAY-20 DEG C)
00323	BOD	15 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 15 DAY-20 DEG C)
00324	BOD	20 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 20 DAY-20 DEG C)
00325	DEOXY K1	BASE E	PER DAY	XXXX.XX	DEOXYGENATION CONSTANT K1 TO BASE E (PER DAY)
00326	BOD	28 DAY	MG/L	XXXXX.X	BIOCHEMICAL OXYGEN DEMAND (MG/L, 28 DAY-20 DEG C)
00330	REOXY K2	BASE E	PER DAY	XXXX.XX	REOXYGENATION CONSTANT K2 TO BASE E (PER DAY)
00335	COD	LOWLEVEL	MG/L	XXXXX.X	CHEMICAL OXYGEN DEMAND, .025N K2CR2O7 (MG/L)
00339	COD MUD	DRY WGT	MG/KG	XXXXXX.	CHEMICAL OXYGEN DEMAND, BOT. DEP. (MG/KG DRY WGT)
00340	COD	HI LEVEL	MG/L	XXXXXX.	CHEMICAL OXYGEN DEMAND, .25N K2CR2O7 (MG/L)
00341	DISS COD	MG/L		XXXXXX.	CHEMICAL OXYGEN DEMAND,DISS. .25N K2CR2O7(MG/L)
00342	SEA COD	MG/L		XXXXXX.	CHEMICAL OXYGEN DEMAND,SALINE,.25N K2CR2O7(MG/L)
00343	DAY DEM	TOTAL	MG/L	XXXXXX.	TOTAL OXYGEN DEMAND (MG/L)
00344	DAY DEM	TOTAL	MG/L	XXXXX.X	TOTAL OXYGEN DEMAND (MG/L) COMBUSTION METHOD

Figure 42

NMRR30 INDICATOR LISTING RUN DATE 11/30/73 PAGE 1

CODE	ABBREVIATIONS			DEC LOC	DESCRIPTION
00001	HSAMPLOC	FT FROM	RT BANK	XXXXX.X	X-SEC. LOC., HORIZ (FT. FROM R BANK LOOK UPSTR.)
00002	HSAMPLOC	% FROM	RT BANK	XXXXX.X	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPSTR.)
00003	VSAMPLOC	DEPTH	FEET	XXXXXX.	SAMPLING STATION LOCATION, VERTICAL (FEET)
00004	STREAM	WIDTH	FEET	XXXXXX.	STREAM WIDTH (FEET)
00005	VSAMPLOC	DEPTH	% OF TOT	XXXXXX.	X-SEC. LOC., VERTICAL (PERCENT OF TOTAL DEPTH)
00006	DISTANCE	FR X	MILES	XXX.XXX	DISTANCE FROM LOCATION IN X MILES
00007	DISTANCE	FR Y	MILES	XXX.XXX	DISTANCE FROM LOCATION IN Y MILES
00008	LAB	IDENT.	NUMBER	XXXXXX.	NUMBER USED IN SAMPLE ACCOUNTING PROCEDURE
00009	HSAMPLOC	FT FROM	LF BANK	XXXXX.X	X-SEC. LOC.(FT FROM LEFT BANK LOOKING DOWNSTRM)
00010	WATER	TEMP	CENT	XXXXX.X	TEMPERATURE, WATER (DEGREES CENTIGRADE)
00011	WATER	TEMP	FAHR	XXXXX.X	TEMPERATURE, WATER (DEGREES FAHRENHEIT)
00012	EVAP 48	IN PAN	DEG C	XXXXX.X	EVAPORATION TEMPERATURE (48 INCHPAN) DEG CENT
00013	EVAP 24	IN PAN	DEG C	XXXXX.X	EVAPORATION TEMPERATURE (24 INCHPAN) DEG CENT
00014	WET BULB	TEMP	DEG CENT	XXXXX.X	WET BULB TEMPERATURE (DEGREES CENTIGRADE)
00015	THERMAL	MILLION	BTU/HOUR	XXXXXX.	THERMAL DISCHARGE MILLIONS OF BTUS PER HOUR
00016	DT FROM	NATURAL	CENT	XXXXX.X	TEMP. DIFFERENCE BETWEEN SAMPLE AND UPSTREAM PT.
00020	AIR	TEMP	CENT	XXXXX.X	TEMPERATURE, AIR (DEGREES CENTIGRADE)
00021	AIR	TEMP	FAHR	XXXXX.X	TEMPERATURE, AIR (DEGREES FAHRENHEIT)
00023	WEIGHT		POUNDS	XXXX.XX	SAMPLE WEIGHT IN POUNDS
00024	LENGTH		INCHES	XXXX.XX	SAMPLE LENGTH IN INCHES
00025	BAROMTRC	PRESSURE	MM OF HG	XXXXXX.	BAROMETRIC PRESSURE (MM OF HG)
00027	COLLECT	AGENCY	CODE	XXXXXX.	CODE NO FOR AGENCY COLLECTING SAMPLE-SEE APPEND.
00028	ANALYZE	AGENCY	CODE	XXXXXX.	CODE NO FOR AGENCY ANALYSING SAMPLE (SEE APPEND)
00029	FIELD	IDENT	NUMBER	XXXXXX.	NUMBER USED IN SAMPLE ACCOUNTING PROCEDURE
00030	INCDT LT	SURF	C/SQCM/D	XXXXXX.	LIGHT, INCIDENT, SUNLIGHT RADIATION INTENSITY
00031	INCDT LT	REMAINS	PERCENT	XXXXX.X	LIGHT,INCIDENT, PERCENT REMAING AT CERTAIN DEPTH
00032	CLOUD	COVER	PERCENT	XXXXXX.	CLOUD COVER (PERCENT)
00033	WEATHER	CODE		XXXXXX.	WEATHER CODE FOR OCEAN-OBSERV. (WMO CODE 4677)
00034	DEPTH-FT	1% LIGHT	REMAINS	XXXXX.X	DEPTH IN FEET AT WHICH 1% SURFACE LIGHT REMAINS
00035	WIND	VELOCITY	MPH	XXXXX.X	WIND VELOCITY (MILES PER HOUR)
00036	WIND	DIR.FROM	NORTH-0	XXXXXX.	WIND DIRECTION IN DEGREES FROM TRUE N (CLOCKWISE)
00037	WIND	FORCE	BEAUFORT	XXXXXX.	WIND FORCE (BEAUFORT UNITS)
00038	WIND	DIRECT	WMO CODE	XXXXXX.	WIND DIRECTION (WMO CODES 0885 + 0887)
00040	WIND	DIRECT	AZIMUTH	XXXXXX.	WIND DIRECTION, AZIMUTH
00041	WEATHER	WMO CODE	4501	XXXXXX.	WEATHER (WMO CODE 4501)
00042	ALTITUDE	FEET	AB MSL	XXXXXX.	ALTITUDE IN FEET ABOVE MEAN SEA LEVEL
00043	CLOUD	TYPE	WMO CODE	XXXXXX.	CLOUD TYPE (WMO CODE 0500)
00044	CLOUD	AMOUNT	WMO CODE	XXXXXX.	CLOUD AMOUNT (WMO CODE 2700)
00045	PRECIP	TOT DAY	IN	XXXX.XX	PRECIPITATION, TOTAL (INCHES PER DAY)
00047	TOT PART	PRESSURE	MM HG	XXXXX.X	TOTAL PARTIAL PRESSURE DISSOLVED GASES (MM HG)
00048	TOT PART	PRESSURE	% SAT	XXXXX.X	TOTAL PARTIAL PRESSURE DISSOLVED GASES (% SAT)
00049	SURFACE	AREA	SQ. MI.	XXXX.XX	SURFACE AREA IN SQUARE MILES
00050	EVAP	TOT DAY	IN	XXXX.XX	EVAPORATION, TOTAL (INCHES PER DAY)
00051	SURFACE	AREA	SQ-FT	XXXXXX.	SURFACE AREA IN SQUARE FEET
00052	RELATIVE	HUMIDITY	PERCENT	XXXXX.X	HUMIDITY, RELATIVE (PERCENT)
00053	SURFACE	AREA	ACRES	XXXXX.X	SURFACE AREA, ACRES
00054	RESSVOIR	STORAGE	AC-FT	XXXXXX.	RESERVOIR STORAGE - ACRE FEET
00055	STREAM	VELOCITY	FT/SEC	XXXXX.X	STREAM VELOCITY (FEET PER SECOND)
00056	FLOW	RATE	GPD	XXXXXX.	FLOW RATE (GALLONS PER DAY)
00057	IND OF	FLOW	CHECKED	XXXXXX.	FLOW, INDICATES IT HAS BEEN CHECKED
00058	FLOW	RATE	GPM	XXXX.XX	FLOW RATE (GALLONS PER MINUTE)
00059	FLOW	RATE	INST-GPM	XXXX.XX	FLOW RATE, INSTANTANEOUS (GALLONS PER MINUTE)
00060	STREAM	FLOW	CFS	XXXXXX.	FLOW, STREAM, MEAN DAILY (CUBIC FEET PER SEC.)
00061	STREAM	FLOW	INST-CFS	XXXXXX.	FLOW, STREAM, INSTANTANEOUS (CUBIC FEET PER SEC.)
00062	WATER	SURF ELE	IN FEET	XXXXX.X	ELEVATION, RESERVOIR SURFACE WATER IN FEET
00063	NO. OF	SAMPLING	POINTS	XXXXXX.	SAMPLING POINTS, NUMBER OF IN A CROSS SECTION

Figure 43

WRS20 BASIN NAME LISTING NOV DATE 06/07/73 PAGE 1

MAJOR BASIN	MINOR BASIN	STREAM NO	STREAM NAME
01	[illegible]	000	NORTHEAST
01	2[illegible]	000	GENESEE RIVER
01	2[illegible]	001	GENESEE RIVER
02	[illegible]	000	NORTH ATLANTIC
02	[illegible]	000	DELA RIV ZONE 1
02	[illegible]	001	DELA RIV ZONE 1
02	[illegible]	000	DELA RIV LEHIGH
02	[illegible]	001	DELA RIV LEHIGH
02	[illegible]	000	DELA R SCH VLKIL
02	[illegible]	001	DELA R SCH VLKIL
02	[illegible]	000	DELA RIV ZONE 2
02	[illegible]	001	DELA RIV ZONE 2
02	[illegible]	000	DELA RIV ZONE 3
02	[illegible]	001	DELA RIV ZONE 3
02	[illegible]	000	DELA RIV ZONE 4
02	[illegible]	001	DELA RIV ZONE 4
02	12	000	SUSQUEHANNA RIV
02	12	001	SUSQUEHANNA RIV
02	13	000	UPPER CHESAPEAK
02	13	001	UPPER CHESAPEAK
02	14	000	POTOMAC RIVER
02	14	001	POTOMAC RIVER
05	[illegible]	000	OHIO RIVER
05	[illegible]	000	ALLEGHENY
05	[illegible]	001	ALLEGHENY
05	[illegible]	000	MONONGAHELA
05	[illegible]	001	MONONGAHELA
05	[illegible]	000	BEAVER
05	[illegible]	001	BEAVER
05	21	000	OHIO MAIN STEM
05	21	001	OHIO MAIN STEM
06	[illegible]	000	LAKE ERIE
06	[illegible]	000	L ERIE CUYAHANY
06	[illegible]	001	L ERIE CUYAHANY

Figure 44

K/R420 NAME FILE LISTING CONTROL TOTAL RUN DATE 06/07/73 PAGE 1

TOTAL CO-HUS	RECORDS	02692
TOTAL NETWORK	RECORDS	00307
TOTAL INDICATOR	RECORDS	01709
TOTAL PASI	RECORDS	0[illegible]34
TOTAL SEQ NAME FILE READ		00000
TOTAL TAPE RECORDS READ		04702
TOTAL TAPE RECORDS NOTE		00000
TOTAL NAME FILE IDX NOTE		04702
TOTAL NAME FILE SEQ NOTE		04703

Figure 45

COMMONWEALTH OF PENNSYLVANIA
DEPT OF ENVIRONMENTAL RESOURCES

LAT-LONG CROSS REFERENCED TO ID CODE STATE WIDE

DATE 06/23/7

I D C O D E	L A T - L O N G	I D C O D E	L A T - L O N G	I D C O D E	L A T - L O N G
61-910-0-01-00-827	285423.0-0414433.0	30-920-1-01-01-401	394317.0-0800343.0	67-912-1-01-02-201	394317.1-0759002.1
67-912-1-01-02-402	394317.2-0782002.2	28-922-1-01-02-601	394319.0-0772323.0	28-922-3-05-01-001	394322.0-0772751.0
[illegible]	[illegible]	67-[illegible]	[illegible]	67-912-1-01-02-703	[illegible]
[illegible]	[illegible]	67-912-1-[illegible]	[illegible]	67-[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
67-912-1-01-02-501	394332.0-0781937.0	30-920-7-01-01-100	394332.0-0801937.0	67-912-1-01-02-[illegible]	394332.0-0781935.0
30-925-6-01-01-100	394333.0-0801529.0	28-922-0-01-00-304	394334.0-0773532.0	36-934-5-01-01-012	394335.0-0780608.0
36-934-5-01-01-010	394338.0-0780819.0	67-912-1-01-02-203	394340.1-0781921.1	67-921-1-01-02-100	394340.1-0782021.1
67-912-1-01-02-401	394340.2-0781931.2	67-921-[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28-922-1-01-02-403	394343.2-0772[illegible]	36-934-1-01-02-201	394344.0-0781741.0	36-934-1-[illegible]	[illegible]
36-934-1-01-02-401	394351.0-0781743.0	36-934-1-01-02-303	394352.0-0781736.0	[illegible]	[illegible]
28-922-1-02-02-303	394354.0-0779019.0	28-931-5-01-01-012	394354.0-0785423.0	28-931-6-01-01-101	394355.0-0785426.0
[illegible]	[illegible]	36-934-1-01-02-[illegible]	394357.0-0781731.0	36-934-1-01-02-304	394355.0-0781735.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
67-920-[illegible]	[illegible]	67-920-5-01-02-013	[illegible]	[illegible]	[illegible]
67-920-3-01-01-002	394400.1-0782736.1	36-934-3-01-01-002	394400.2-0780736.2	28-922-1-02-02-701	394401.0-0781736.0
30-920-7-01-01-100	394402.0-0800414.0	67-002-1-01-02-702	394403.0-0785735.0	28-622-1-02-02-402	394403.0-0772126.0
[illegible]	[illegible]	67-[illegible]	[illegible]	[illegible]	[illegible]
67-[illegible]	[illegible]	67-945-[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
67-[illegible]	[illegible]	28-922-3-07-1-002	394411.0-0778330.0	[illegible]	[illegible]
28-931-7-01-01-101	394411.5-0785419.0	67-950-5-01-02-010	394412.0-0781207.0	30-920-6-01-01-100	394412.0-0800401.3
01-922-6-01-02-100	394413.1-0780847.1	01-002-1-01-02-201	394413.1-0776456.1	01-922-6-01-02-101	394413.2-0782647.2
[illegible]	[illegible]	28-002-7-01-02-100	394414.0-0772314.0	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
67-943-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
67-943-5-02-[illegible]	394416.1-0784200.1	67-943-[illegible]	[illegible]	[illegible]	[illegible]
01-002-7-01-02-102	394417.0-0772452.0	36-904-1-01-02-301	394418.0-0791926.0	28-922-3-05-01-002	394420.0-0772850.0
28-922-1-02-02-304	394420.0-0772935.0	28-922-3-05-01-001	394420.4-0772850.0	67-943-1-01-02-702	394421.0-0784136.0
01-002-7-01-02-200	394421.0-0772454.0	15-[illegible]	[illegible]	15-[illegible]	394422.5-0785292.1
15-[illegible]	[illegible]	01-002-1-01-02-210	[illegible]	[illegible]	[illegible]
67-943-1-01-02-101	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28-922-1-01-02-401	[illegible]	67-943-1-01-02-201	[illegible]	67-943-1-01-02-701	[illegible]
67-943-1-01-02-401	394425.2-0784217.2	67-943-1-01-02-403	394425.2-0784233.2	01-002-1-01-02-702	394426.0-0772525.0
67-943-1-01-02-204	394429.1-0784147.1	28-922-1-01-02-202	394429.1-0772654.1	67-943-1-01-02-402	394429.2-0784147.2
28-922-1-01-02-402	394429.2-0772654.2	01-002-3-01-02-012	[illegible]	67-943-1-01-02-206	394430.1-0784243.1
67-943-1-01-02-404	[illegible]	28-918-[illegible]	394431.0-0774741.0	36-934-1-01-02-201	394431.0-0781740.0
36-934-1-01-02-701	394431.0-0793302.0	01-002-5-01-02-010	394432.0-0770327.1	01-002-[illegible]	394432.0-0772[illegible]
28-922-[illegible]	394432.0-0773831.0	05-907-1-02-02-201	394432.0-0784037.0	28-922-[illegible]	394432.2-0772011.0
28-922-1-01-02-701	394434.0-0772825.0	05-907-1-02-02-301	394435.1-0784032.1	05-907-1-02-02-302	394436.2-0784032.2
01-918-5-02-02-011	394437.1-0772725.1	01-918-5-02-02-012	394437.2-0772725.2	28-002-7-01-02-200	394437.2-0773576.0
36-919-[illegible]	394439.0-0775[illegible]	30-907-1-02-01-401	394440.0-0795[illegible]	28-002-7-01-02-201	394440.2-0773[illegible]
01-[illegible]	[illegible]	01-002-7-[illegible]	394441.0-0772[illegible]	01-[illegible]	394442.0-0772[illegible]
67-[illegible]	394442.0-0771745.0	36-934-1-01-02-5[illegible]	394442.0-0782231.0	01-002-7-01-02-201	394442.1-0772525.2
28-922-3-07-01-001	394446.1-0773350.0	67-950-5-01-02-012	394447.0-0781745.0	01-002-1-01-02-209	394448.0-0772443.0
01-002-1-01-02-402	394448.0-0772443.0	01-002-1-01-02-202	394448.1-0772448.1	28-903-5-01-02-011	394449.0-0781031.0
28-903-5-01-02-012	394450.0-0781025.0	05-907-1-02-02-401	394450.0-0784034.0	15-967-5-02-01-011	394451.0-0780112.5
01-918-5-07-02-010	394451.0-0772723.0	15-967-5-02-01-010	394451.1-0780112.6	15-967-5-02-01-012	394451.2-0780112.6
15-[illegible]	394451.3-0[illegible]	01-002-1-01-02-204	[illegible]	15-[illegible]	[illegible]
67-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
36-934-1-01-02-602	394455.0-0792[illegible]	28-002-3-01-01-001	394455.0-0773306.0	28-002-3-01-01-002	394456.1-0773306.0
15-967-5-03-01-011	394457.0-0780111.5	15-967-5-03-01-010	394457.0-0780111.6	15-967-5-03-01-012	394457.0-0780111.7

Figure 45 (continued)

COMMONWEALTH OF PENNSYLVANIA
DEPT OF ENVIRONMENTAL RESOURCES

LAT-LONG CROSS REFERENCED TO ID CODE STATE WIDE

DATE 08/26/7

ID CODE	LAT-LONG	ID CODE	LAT-LONG	ID CODE	LAT-LONG
15-967-5-03-01-013	394457,0-0760111,8	29-903-5-01-02-010	394457,0-0761045,0	01-802-1-01-02-501	394459,0-0770536,0
15-967-5-02-01-013	394459,0-0760053,8	15-926-8-01-01-999	394501,0-0754536,5	00-000-0-00-000000	394504,0-0791554,2
00-000-0-00-000	394506,0-0791907,4	26-902-1-01-02-912	394510,0-0773331,0	56-937-7-01-02-300	394510,0-0792451,0
01-802-7-01-02-171	394511,2-0773[illegible],2	00-000-0-00-000	394511,2-0791504,7	00-000-0-00-000	394511,0-0791507,4
01-802-1-01-02-237	394512,1-0773543,1	01-802-1-01-02-474	394512,2-0773543,2	01-802-1-01-02-779	394512,0-0773543,3
67-950-1-01-02-001	394513,0-0793332,0	00-000-0-00-000-000	394514,2-0791507,4	26-902-1-01-02-709	394516,0-0773018,0
67-939-1-01-02-271	394517,1-0793537,1	67-939-1-01-02-402	394517,2-0793537,2	01-922-1-01-02-621	394518,0-0772[illegible],0
67-939-1-01-02-232	394519,1-0793526,1	67-939-1-01-02-253	394519,2-0793536,2	67-959-1-01-02-491	394519,2-0762125,3
01-[illegible]	394520,[illegible]	26-[illegible]	[illegible]	05-[illegible]	[illegible]
00-000-0-00-000	394522,[illegible]	[illegible]	[illegible]	26-[illegible]	[illegible]
56-937-7-01-02-101	394523,0-0778651,2	67-95[illegible]-03-02-020	394525,0-0791611,0	67-[illegible]	[illegible]
67-950-3-01-01-100	394526,0-0791513,0	67-950-5-03-02-013	394526,1-0761600,1	67-950-5-03-02-022	394526,2-0761600,2
67-950-3-01-02-021	394528,0-0791602,0	67-950-8-01-01-101	394527,1-0761602,1	67-950-8-01-02-101	394527,2-0761602,2
01-911-1-04-01-100	394529,1-0772[illegible],0	01-922-1-01-02-701	394529,0-0772346,0	67-954-1-02-02-110	394529,0-0756036,0
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32-[illegible]-01-00-714	394538,0-0795874,0	67-952-1-01-02-501	394538,0-0764146,1	67-952-1-01-02-601	394536,0-0764146,2
67-[illegible]-1-01-02-501	394539,0-0764133,0	26-902-1-01-02-501	394538,1-0773302,1	26-902-1-01-02-502	394539,2-0773302,2
67-[illegible]-1-01-02-701	394539,0-0764141,3	67-952-1-01-02-2 1	394539,1-0764141,1	67-952-1-01-02-401	394539,2-0764141,2
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01-922-1-01-02-471	394542,2-0772[illegible],2	00-[illegible]	394544,[illegible]	01-[illegible]	[illegible]
01-911-1-04-01-200	394547,0-0772335,3	67-952-1-01-02-701	394544,[illegible]	67-[illegible]	[illegible]
67-951-7-01-02-174	394550,0-0755934,0	26-922-1-03-02-471	394549,0-0773623,0	26-917-5-03-01-012	394549,0-0756529,0
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26-942-0-01-00-723	394559,0-0793733,0	00-000-0-00-00-000	394558,0-0793340,0	00-000-0-00-00-000	394559,4-0[illegible]
67-954-1-01-02-473	394611,2-0765[illegible],2	30-907-8-02-01-100	394610,0-0795351,3	67-954-1-01-02-203	394611,1-0754034,1
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01-910-3-02-02-012	394612,1-0772[illegible],2	67-[illegible]	[illegible]	67-[illegible]	[illegible]
01-910-3-02-02-010	394614,0-0772[illegible],0	67-954-1-01-02-303	394616,0-0764011,0	67-[illegible]	[illegible]
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23-603-1-01-02-705	394629,0-0774341,0	01-913-1-01-02-201	394631,1-0772355,1	01-913-1-01-02-401	394631,2-0772355,2
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67-002-1-01-02-705	394652,0-0765738,1	67-002-1-01-02-504	394652,0-0765738,2	28-603-7-01-02-500	394652,0-0774358,0
67-951-7-01-02-505	394654,1-0765[illegible],1	67-951-7-01-02-505	394654,2-0765[illegible],2	67-951-7-01-02-507	394654,3-0765[illegible],3
01-913-1-01-02-501	394655,[illegible]	67-[illegible]	[illegible]	05-[illegible]	[illegible]
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01-913-1-01-02-002	3947[illegible]	67-[illegible]	394703,[illegible]	67-[illegible]	[illegible]
35-935-3-01-01-001	3947[illegible]	67-923-1-01-02-002	394707,0-0764327,0	01-913-7-01-02-200	3947[illegible],0-0772316,0
01-913-7-01-02-100	394708,1-0772135,1	01-913-7-01-02-101	394708,2-0772136,2	28-803-1-01-02-602	3947[illegible],0-0774228,0

SECTION IV

SYSTEM MANPOWER AND OPERATING COST REQUIREMENTS

Currently, the Bureau of Water Quality Management has 29 people working full-time in support of WAMIS. This number, however, does not give a true indication of the manpower required merely to maintain the three operational modules. Many of the staff located at headquarters devote a significant amount of their time toward system design and development.

Ot the 29 people working full-time in support of WAMIS, 15 are located at headquarters and 2 are located at each of seven regional offices. A WAMIS coordinator interfaces between the various Bureau headquarters divisions. The other 14 headquarters personnel are part of the WAMIS section.

The Chief of the WAMIS Section administers two units: the Development and Operations Units. Classifications of personnel in the Section are as follows:

Section Chief
Unit Managers (2)
Systems Analysts (2)
Programmers (3)
Clerical Staff (6)

Each region is served by a professional WAMIS field representative and a clerk, hence, there are 14 WAMIS field personnel.

Estimated existing annual operating costs for WAMIS are $422,782. However as mentioned previously, some of the staff is involved in system design and development efforts. If only those headquarters personnel required to maintain the system as it now operates were used, the estimated annual operating budget would be $288,340. This assumes that the following staff would be required: one manager, five clerical personnel, and 14 field personnel.

SECTION V

SYSTEMS APPLICATION SUMMARY

Detailed technical documentation contained in Volume II covers the Facility Status, Contact, and Water Quality Modules and the Name File. The Name File is treated separately because it is a support system. The Cross-Reference Subsystem, on the other hand, is routinely updated as a part of the weekly Facility Status update and, therefore, is documented as a part of that module.

Details on availability of program tapes can be obtained by contacting the Washington Environmental Research Center, EPA, Washington, D. C, 20460, or the Pennsylvania Department of Environmental Resources. The programs, in order on each tape are:

	Program Name	Module
1.	CFRR01	Facility Status
2.	CFUR99	Facility Status
3.	CFVW05	Facility Status
4.	COPR50	Contact
5.	COUR30	Contact
6.	COVR10	Contact
7.	FAPR63	Facility Status
8.	FAPW80	Facility Status
9.	FARR01	Facility Status
10.	FARR60	Facility Status
11.	FARR70	Facility Status
12.	FARW10	Facility Status
13.	FAUW40	Facility Status
14.	FAVW30	Facility Status
15.	NMUR30	Name File
16.	SRPZ10	Facility Status
17.	SRPZ30	Facility Status
18.	SRPZ32	Facility Status
19.	WQPW45	Water Quality
20.	WQRR01	Water Quality
21.	WQRR02	Water Quality
22.	WQRW10	Water Quality
23.	WQUW35	Water Quality
24.	WQUW50	Water Quality
25.	WQVW30	Water Quality
26.	WQVW40	Water Quality

HARDWARE

All programs are written in RCA COBOL and, in their totality, consist of some 33,000 source statements. An RCA Spectra 70 MOD45 Computer is currently employed to operate the WAMIS system. However, it should be possible to operate the system on any comparably sized third or fourth generation computer with appropriate Job Control Language changes. The system should be particularly adaptable to IBM hardware configurations. All programs may be accommodated in 95K of core with four disk packs and six tape drives or some comparable combination of peripheral storage devices.

STAFF

The size of staff required to operate WAMIS, exclusive of program development, depends on the number of transactions and required turnaround time. A minimum staff would consist of an operations manager, programmer, operator, and a keypuncher. Although this staff is adequate, the number of keypunchers is considered minimal to support a viable and responsive system.

OPERATIONAL SCHEDULING

The Commonwealth of Pennsylvania updates the master files of the three operational WAMIS modules weekly. The system could be updated more (less) frequently if desired, thus insuring more (less) up-to-date master files and allowing the frequency of certain reports to be increased (decreased) should the user desire. Care must be taken in changing report frequency, however, to ensure that the change in frequency is meaningful. For instance, a report that is presently designed to provide statistical information over monthly periods cannot be changed to a weekly report without some changes in the calculating routines themselves. The running time for updating master files depends upon the computer configuration employed and the amount of data input, but an average weekly update of all master files for the Pennsylvania System requires approximately 20 hours on the RCA Spectra 70 configuration. A very rough rule of thumb for report production is 15 minutes per report in addition to update time. This rule of thumb must be taken liberally, since the running time of a report obviously depends on many things, including the number of calculations made to produce the report and, more importantly, the number of lines of print contained in the report itself.

ELEMENTS OF DOCUMENTATION

Documentation in the Appendices contains user inputs, sample reports, and the following for each module: system flowchart, clerical procedures, control procedures, operator's instructions, system book, and program books. All of the above mentioned documentation is complete with the exception of the operator's instructions section for the Water Quality

Module which is not available as of this date. There are 26 Program Books distributed as follows: 1 in Name File, 3 in Contact, 8 in Water Quality, and 14 in the Facility Status Module.

USER INPUTS

Punched (IBM) cards are the vehicles whereby information is entered into the WAMIS computers. These cards are usually punched by staff personnel at WAMIS headquarters from formated coding sheets filled out by personnel in the field and subsequently forwarded to headquarters. Detailed instructions describing the manner in which the coding sheets are to be filled out, as well as instructions for transferring information from the coding sheets onto punched cards are contained in the user input section of the module documentation.

The importance of strict adherence to the procedures for entering data into the system cannot be overemphasized. The volume of data to be handled is very large and the personnel who collect are usually not oriented toward automatic data processing. Therefore, careful and detailed instruction in data entry procedures is a must if the system is to operate successfully. No matter how cleverly designed, an automated system will not produce credible output if its input is not within the limits of accuracy provided for in the system. Many automated systems have been discredited by poor data input design or procedures.

SAMPLE REPORTS

Actual sample reports produced by WAMIS are presented for each module. Actual report samples are used as well as report layouts to give the reader and prospective user the best possible picture of the type of information available from the Pennsylvania system in its present configuration. These are the basic reports only. There are an almost unlimited number of variations to these reports, major and minor, that can be obtained with very minor modifications to the report generating programs.

SYSTEM FLOWCHART

System flowcharts are included for each module and for the major subsystems within modules. Each flowchart consists of a block diagram representing the system and data flow throughout the system. Included are the required job control statements and descriptions of the data files. Examples of descriptions are type of volume the file resides on, record length, blocking factor, etc.

CLERICAL PROCEDURES

This subsection contains clerical procedures and a reference to the sample reports section. An example of a clerical procedure is the distribution of reports after they are produced.

CONTROL PROCEDURES

This section contains data control procedures and references to the system flowchart and sample reports sections. An example of a data control procedure is the routing of system inputs through the keypunch section to computer operations to final disposition.

OPERATOR'S INSTRUCTION

This is the computer run book and contains detailed run instructions for each program in the module along with reference to the system flowchart and sample reports sections. Included are abnormal halt messages and required actions. An example of a required action would be the correction of a mispunched control card followed by the required restart procedure.

SYSTEM BOOK

This is the system analyst's reference section. An introduction and narrative of the system is presented in this section. The system introduction describes the objectives of the system, and the system narrative briefly describes each program and its purpose. In addition, the system book has references to the system flowchart and sample reports. The system analyst would use this book to obtain an overview of the system and a brief narrative of the purpose of each program. It is particularly useful to the analyst in determining the impact that changes to one part of a system will have on the remaining parts.

PROGRAM BOOK

There is a program book for each of the 26 programs in WAMIS. The contents of each book are:

Introduction
Revision History
Program Narrative
System Segment Flowchart
I/O Data Layouts
Sample Reports
Source Listing
Operators' Section

The second step would entail running test data through all programs and checking the reports produced. The system flowcharts, job control statements, and operator's instructions would be very useful to the user in running the system. Job control statements direct the computer to execute programs in the required sequence. Job control statements are found in the system flowcharts sections.

The final step would be the building of the required data bases. Data bases generally grow over time, but the user should have enough data to provide useful output following implementation. The user's input section would be used for this step, as well as in the day-to-day operation of the system to provide guidance in the preparation of data.

The system book would be used to provide overall guidance during the implementation stage and should be updated thereafter. The program book would be used during implementation and whenever a change was needed. It should be updated with all program changes, especially concerning the source program listing. It would also be used by the programmer to research questions concerning what a program does or could be changed to do.

The clerical procedures and data control sections are used in daily operations to provide instructions to clerks regarding distribution of data and reports. In addition, instructions are provided to code control cards and to specify required tapes or other materials for proper job execution by the computer operator.

The introduction indicates the program's objective. Revision history describes the changes that have been made to the program. The program narrative describes the purpose of each paragraph.

A segment of the system flowchart and detailed descriptions of input and output files are in the program book. Detailed descriptions of files are necessary to obtain a thorough understanding of the file and its uses. The source listing produced by the compiler is included, as well as references to the sample reports and operator's instructions section.

The detailed process flowchart ("Quick Draw"), object program listing, locator map listing, and linkage editor map are not included since they are strictly applicable to the WAMIS as used on a particular hardware configuration. However, these documents can be readily generated upon installing WAMIS on particular computer system in the following manner: 1) process flowchart can be produced by the compiler; and 2) detailed process flowcharts can be obtained by running "Quick Draw" or a comparable program using as input the desired COBOL source program.

WAMIS IMPLEMENTATION

Implementation of WAMIS might proceed in the following three steps. The first step would be to obtain the WAMIS documentation report and program tape; all of the programs would then be compiled and cataloged on the user's computer. The compiler listings should be checked against the program listings contained in the program books to ensure completeness of each program.